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CUS SOFTWARE ADMINISTRATOR AND OPERATOR MANUAL

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1 INTRODUCTION

1.1 Purpose

This document describes all procedures to be executed by administrators and operators in order to support correct activities of CUS facility

1.2 Scope

The CUS facility is a system operated by EEM-ADU section, fitting the following main requirements:

- Order handling, to manage requests for satellite data from users world wide
- Mission Planning for ERS-2 payloads, according to user requests
- Production management, to handle requests for products generated from satellite data
- Reference Inventory, to keep a centralised inventory of all missions available

1.3 References

A1 CU-MA-MDA-SY-0003 CENTRAL USER SERVICE USER'S MANUAL

1.4 Abbreviations

ADD	Architectural Design Document
A.O.	Acquisition Order
CUS	Central User Services System
D.U./ D.O.	Delivery Unit / Detail Order
DESCW	"Display ERS Swath Coverage" for PC/Windows
ECF	ESRIN Central Facilities
EO	Earth Observation
ERS	European Remote Sensing satellite
ESA	European Space Agency
FDP	Fast Delivery Product

GUI	Graphical User Interface
HW	Hardware
ICD	Interface Control Document
ISS	Interface Sub-Set (multi-mission, multi-protocol, multi-machine)
ISSCUS	ERS global products order handling system
MMI	Man-Machine Interface
MUIS	Multi-mission User Information Services
OCS	Eurimage Commercial Order Handling System
OHS / MMOHS	ESRIN new Multi-mission Order Handling System
P.O.	Product Order
P.O.I.	Product Order Item
P.U.	Package Unit (in MUIS and PROMISE)
PAF	Processing and Archiving Facility
PF	Processing Facility
PI	Principal Investigator
PP	Pilot Project
PROMISE P.O.H.	PRoduct Ordering system for MultIple Satellite Environment, Product Order Handling
R.S.	Remote Sensing
S.O.	Sensing Order
SW	Software
T.B.C.	To Be Confirmed
T.B.D.	To Be Defined
TPM	Third-Party Missions (ESA supported non-ESA satellites)
U.O.	User Order

1.5 Document Overview

This document is organised as follows:

- This chapter describes the purpose of the document itself, and the scope of the application being operated
- Chapter 2 provides the list of procedures, sorted out by operational aras

2 PROCEDURES

2.1 MISSION PLANNING

2.1.1 PHASE DEFINITION

2.1.1.1 Creating a phase

User profile	CUS System Manager, CUS Operations Planner
Connection	VT200
Start time	on request
Duration	0.5 day (depending on phase duration)
Frequency	N/A
References	CUS Software Reference Manual, CFI User Manual, and Operational Files
Related tables and files	CUS tables: CATDD_unpr_catalogue GAPDD_xxx HERDD_phase ORSDD_xxx URQDD_user_request

Scope

It generates the tables GAPDD_xxx which provide storage for fields used to plan satellite activity.
The phase parameters are stored in the HERDD_phase table.
The table HERDD_phase defines the periods, when the orbit is stable (fixed mean nodal period). The manoeuvres to change from one orbit to another are not defined in this table, but can be calculated as the difference between end of previous and start of next phase.

Input

1- Ensure that the associated ORACLE account has the privilege to update HERDD_phase and GAPDD_XXX tables.
2- Ensure that the phase is not already defined (Phase change, option "H"). If so, the old phase has to be deleted first (See procedure "Deleting a phase").
3- Ensure that the CFI software modules have been run using the desired phase parameters.
See the procedures :
Generate the Orbitevent file
Generate the Visibility table
Generate the Daylight table
4- Ensure that the logical "E*n*_PLAN_CYCLE_*x*", where *n* is the satellite identifier (1 for ERS-1, and 2 for ERS-2) and *x* is the phase identifier, has been defined and points to the directory where the ORBITEVENT.E*n* file is located.

5- Ensure that the logical SQL_CFI_ACCOUNT points to the oracle account where DAYLIGHT and VISIBILITY tables are, and that the logical SQL_ACCOUNT_PWD points to the required data Oracle account for the current environment (i.e. ORAPROD for production).
6- Inform ISS of the creation. (they use a copy of HERDD_PHASE).

Initital Conditions

(Describes the conditions which must be matched before running the procedure)

Sequence of Operations

1- Run the phase change tool typing "PHASE_CHANGE at VMS prompt;
2- Select a working copy (1 or 2);
Choose option "C" for create a phase;
4- Enter, one by one, the following phase parameters:

- Phase to create
- Satellite
- Number of orbit in phase
- Number of orbit in cycle
- Days per cycle
- First mission orbit number

These parameters must correspond exactly to the ones found in the ORBITEVENT.E*n* file. (See the CFI Operational File Document "ER-TN-ESA-GS-0030"). Note the differences in the units used.
5- If all the parameters were entered correctly, the message "Creating phase" is displayed. Wait ...

Output

The phase change tool generates a PCHG*nnnn_date_time*.RPT file in the reports directory.

Error Handling

The phase change tool also generates a process errorlog file in the directory PHAP_XPHT_LOG_DIR.

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Notes

(Any useful information not covered before.)

2.1.1.2 Deleting a phase

User profile	CUS System Manager, CUS Operations Planner
Connection	VT200
Start time	on request
Duration	1 day (depending on phase duration)
Frequency	N/A
References	CUS Software Reference, Manual CFI User Manual
Related tables and files	CUS tables: CATDD_unpr_catalogue GAPDD_ HERDD_phase ORSDD_xxx URQDD_user_request

Scope
(This procedure is used to delete an existing phase.)
Input
(Describes the input (e.g. file) required by the procedure.)
Initial conditions

1. Ensure that the associated Oracle account has the privilege to update CATDD_unpr_catalogue, HERDD_phase, ORSDD_XXX, GAPDD_XXX and URQDD_user_request tables.
2. Ensure that the CFI file ORBITEVENT.En corresponds to the phase to be deleted. If not please run the procedure "Generate the ORBITEVENT file".
3. Ensure that the logical E*n*_PLAN_CYCLE_*x* has been defined and points to the directory where the ORBITEVENT.E*n* file is located.
4. Ensure that the logical SQL_ACCOUNT_PWD points to the required data Oracle account for the current environment (i.e. ORAPROD for production).

Sequence of operations
1-Run the phase change tool typing "PHASE_CHANGE" at VMS prompt;
2-Select a working copy (1 or 2);
3-Choose option "D" to delete a phase;
4-Enter phase to delete and satellite identifier;
5-The message "Deleting phase" is displayed after confirmation by the user. Wait ...
6-Inform ISS of the deletion.
Output
The phase change tool generates a PCHG*nnnn_date_time*.RPT file in the reports directory.
Effect on User Request and Planning :
All Planned or Partially Planned user request within the deleted phase go to the Rejected state.

The corresponding Orbit Selection, Catalogue entries (Future and Past) are deleted.
Orbits of the old phase are deleted from the GAP.
Other user requests are not changed.

Error handling

The phase change tool also generates a process errorlog file in the directory PHAP_XPHT_LOG_DIR.

Notes

(Any useful information not covered before.)

2.1.1.3 Modifying a phase

User profile	CUS System Manager, CUS Operations Planner
Connection	VT200
Start time	on request
Duration	1 day (depending on phase duration)
Frequency	N/A
References	CUS Software Reference Manual,
Related tables and files	CUS tables: HERDD_phase CATDD_unpr_catalogue CATDD_last_orbit_no GAPDD_gap_orbit ORSDD_xxSCOPE

Scope
This procedure is used to modify an existing phase.Note
that only the following changes can be performed:

- a) Set the new start time before OR after the old start time AND/OR
- b) Modify the number of orbits in phase (Option "L") OR
- 3) Modify the mission orbit number of the orbits (Option "M")

Remarks:
In case (a), the time shift can only correspond to aninteger number of orbits (ie. for a 3 day cycle phase, the starttime can be set forward 3 days, thus corresponding to 43 orbits.The new first orbit of the phase must have in this case the samelongitude of ascending node as the old one, and its mission orbitnumber must be equal to "Old first mission orbit number -43".)
If the time shift does not correspond to a multipleof cycle (ie. a multiple of 43 orbits in the 3 day cycle), thenthe new first orbit of the phase must have the adequate longitudeof ascending node. For all other cases (ie. when the coveragehas to be shifted in space or in time), the old phase has to bedeleted first, then the new phase can be generated (see relatedprocedures).

Input
(Describes the input (e.g. file) required bu the procedure.)

Initial conditions

1. Ensure that the associated Oracle account has the privilege to update HERDD_phase, ORSDD_xxx, GAPDD_xxx and URQDD_xxx tables.
2. Ensure that the CFI software modules have been run using the desired phase parameters. See the procedures :

- - Generate the Orbitevent file
- - Generate the Visibility table

- - Generate the Daylight table

Note : in case (a), the ORBITEVENT.E<I>n</I> file must contain all orbits of the old phase plus all orbits of the new phase

1. Ensure that the logicals E<I>n</I>_PLAN_CYCLE_<I>x</I> has been defined and points to the directory where the ORBITEVENT.E<I>n</I> file is located.
2. Ensure that the logical SQL_CFI_ACCOUNT points to the Oracle account where DAYLIGHT and VISIBILITY tables are, and that the logical SQL_ACCOUNT_WD points to the required data Oracle account for the current environment (i.e. ORAPROD for production)

Sequence of operations

1. Run the phase change tool typing "PHASE_CHANGE" at VMS prompt;
2. Select a working copy (1 or 2);
3. Choose option "L" to modify the length of the phase (case a and/or b) or option "M" to modify the mission orbit number (case c);
4. Enter phase to modify and the satellite identifier;
5. Enter, one by one, the modified phase parameters:

- - Start date time(DD-MM-YYYY HH:MM:SS.SSS)
- - Number of orbits in phase
- - Longitude of first ascending node (0-360 deg)
- - First mission orbit number

These parameters must correspond exactly to the ones found
in the ORBITEVENT.E<I>n</I> file. (See the CFI Operational File
Document "ER-TN-ESA-GS-0030"). Note the differences in the units used.
6. If all the parameters were entered correctly, the message "Modifying phase" is displayed. Wait
7. In case the ORBITEVENT.E<I>n</I> file contains orbits of the old phase which are not part of the new phase, regenerate the
orbit event file, and remove corresponding entries from
DAYLIGHT and VISIBILITY tables (See related procedure);8- Inform ISS team of the change since they use the HERDD_phase table.

Output

OUTPUTThe phase change tool generates a PCHG<I>nnnn_date_time.</I>RPTfile in the reports directory.
Effect on User Request and Planning (in case a and b) :

BEFORE	AFTER
UR Submitted within new phase	UR Submitted
UR Submitted outside new phase	UR Submitted
UR Awaiting Planning within new phase	UR Awaiting Plan
UR Awaiting Planning outside new phase	UR Awaiting Plan
UR Planned within new phase	UR Planned
UR Planned outside new phase	UR Rejected
UR Partially Planned within	UR Partially plan

new phase
UR Partially Planned UR Rejected
outside new phase
In case (c), the user request and the planning are not affected.

Error handling

The phase change tool also generates a process error log file in the directory PHAP_XPHT_LOG_DIR.

2.1.1.4 Generate Visibility table

User profile	CUS System Manager,CUS Operations Planner
Connection	VT200, Direct connection on ERSCUS
Start time	on request
Duration	2 h (depending on phase duration)
Frequency	Each time phase definition is to be changed When a station mask is added or modified
References	VISIBILITY GEN User Manual CFI Operation File
Related tables and files	CUS tables GS_LINK_AODVISIBILITY CFI files ORBITEVENT.E*n*(where n=1,2) STATION.DBF STATION.LST Output files : Visibility_gen.log

Scope

This procedure is used to add or delete records from the table VISIBILITY. Each record defines a segment of station visibility on one orbit for a satellite. All orbits from all phases for all satellites containing a visibility segment must have an entry in this table. These orbits are referenced by the mission orbit number. The VISIBILITY table is used by the Phase Change tool to generate The GAP tables. It is also accessed during planning activity (GAP validation).

Input

E*n*_PLAN_CYCLE_*x*:ORBITEVENT.E*n* (See "Generation of the Orbitevent File")
CUS$DBF_DIR:STATION.DBF, the stations mask
CUS$DBF_DIR:STATION.LST, the list of stations for which visibility segments need to be added or deleted in the visibility table (Manually updated).
CUS$SCENARIO_DIR:ORB_cyclelength.E*n*
GS_LINK_AOD, a CUS table giving the start and end of link angles for the stations (Manually updated)

Initial conditions

1. Make sure that the ORBITEVENT.E*n* was generated and is in the directory defined by the logical "E*n*_PLAN_CYCLE_*x*" where *n* is the satellite identifier (1 for ERS-1, and 2 for ERS-2) and *x* is the identifier of the phase).
1. The VISIBILITY table must exist and must be in the same Oracle account as the GS_LINK_AOD table.
1. Make sure you have a write access to E*n*_PLAN_CYCLE_*x*.

Sequence of operations

1. Type VISIBILITY_GEN at the VMS prompt and enter the desired satellite and phase;

2. Enter the name and the password of the Oracle account where the tables GS LINK AOD and VISIBILITY can be found. (Generally, this account is different from the data account of the current environment i.e. ORACFI in production);
3. Enter the mode, "Add" or "Delete";
4. Enter satellite, first and last orbit number. These orbits must be present in the ORBITEVENT.E*n* when in mode "Add";
5. Enter Roll-tilt mode (Y/N).

Output

In case of "ADD" mode, a certain number of visibility segments per station is inserted in the VISIBILITY table.

VERY IMPORTANT NOTE !! :

There is a bug in VISIBILITY_GEN. In some cases, no segments at all are generated for a station, or just a subset.

It should be verified via SQL that the number of segments is correct (The more the station is close to the pole, the more segments they should be).

For example, type in SQL the command :

SELECT COUNT(*),GS_ID FROM VISIBILITY GROUP BY GS_ID;

In case of problem on one station, VISIBILITY_GEN should be run again for this station only (Modifying the STATION.LST file). The bug seems not to occure when only one station is proccessed at a time.

Error handling

A VISIBILITY_GEN.LOG file is generated in current directory giving the list of processed stations, the number of segments created and rejected, and a list of warnings sent back by module2m.

A MODULE3.OUT file gives a more detailed report of the segment calculations.

2.1.1.5 Generate Daylight table

User profile	CUS System Manager, CUS Operations Planner
Connection	VT200, To be run on ERSCUS
Start time	on request
Duration	30 mn (depending on phase duration)
Frequency	N/A
References	CUS Software Reference Manual, CFI User Manual CUS tables : DAYLIGHT CFI Files :ORBITEVENT.E*n* (where *n* =1,2) CUS tables : DAYLIGHT CFI Files :ORBITEVENT.E*n* (where *n* =1,2)
Related tables and files	CUS tables : DAYLIGHT CFI Files :ORBITEVENT.E*n* (where *n* =1,2)

Scope

This procedure is used to add or delete records in the CUS table DAYLIGHT. Each record gives the entry and exit times of eclipse for an orbit. DAYLIGHT must contain one entry for each orbit of the phases defined in CUS. These orbits are referenced by the mission orbit number.

The DAYLIGHT table is used by the Phase change tool to generate The GAP tables. It is also accessed during planning activity (GAP validation).

Input

E*n*_PLAN_CYCLE_*x*:ORBITEVENT.E*n*

Initial conditions

1. Make sure that the ORBITEVENT.E*n* was generated and is in the directory defined by the logical "E*n*_PLAN_CYCLE_*x*" where *n* is the satellite number (i.e. 1 for ERS-1, 2 for ERS-2) and *x* is the phase identifier.
1. The DAYLIGHT table must exist in the required Oracle account.

Sequence of operations

1. Type DAYLIGHT_GEN at VMS prompt and enter the satellite and phase;
1. Enter the name and the password of the Oracle account where the table DAYLIGHT can be found (generally, this account will be different from the data account of the current environment; ie, ORACFI in the production);
1. Enter the mode, "Add" or "Delete";
1. Enter satellite, first and last orbit number. These orbits must be present in the ORBITEVENT.E*n* when in mode "Add".

2.1.1.6 Generate the Orbit event file

User profile	CUS System Manager, CUS Operations Planner
Connection	VT200
Start time	on request
Duration	0.25 day (depending on phase duration)
Frequency	Before a phase definition modification
References	CFI Operation Files (ER-TN-ESA-GS-0030), Mission Planning CUS Software Interface Document (ER-TN-ESA-GS-364)
Related tables and files	CFI Files : See Input & Output

Scope

This procedure generates a set of files defining the satellite orbital parameters and the instrument swaths for all orbits of a defined phase. These files, called the CFI files, are used by the phase change tools and for daylight and visibility generation.

Input

- CUS$SCENARIO_DIR:SCENARIO.E*n* - (where n = 1,2)
- CUS$SYSTEM_DIR:ROLLTILT.E*n*
- CUS$SYSTEM_DIR:VERSION.E*n*
- CUS$SYSTEM_DIR:MOONECLIPSE.E*n*
- CUS$SYSTEM_DIR:SUNZENITH.E*n*

Initial conditions

The directory logical E*n*_PLAN_CYCLE_*x* must be defined prior to generating the Orbitevent file.

Sequence of operations

1. Type ORBITEVENT_GEN at VMS prompt;
1. Enter the satellite identifier and phase parameters to define the current output directory (i.e."E*n*_PLAN_CYCLE_*x*:");
1. Enter the first and last orbit numbers.

Output

1. E*n*_PLAN_CYCLE_*x*:ORBITEVENT.E*n*
2. CUS$SCENARIO_DIR:ORB_*jjjj*.E*n* where *jjjj* is the cycle lenght and *n* is the satellite identifier
3. CUS$SCENARIO_DIR:SAR_*jjjj*.E*n*
4. CUS$SCENARIO_DIR:RAD_*jjjj*.E*n*
5. CUS$SCENARIO_DIR:RADRED*jjjj*.E*n*
6. CUS$SCENARIO_DIR:WND_*jjjj*.E*n*
7. CUS$SCENARIO_DIR:SARRTM_*jjjj*.E*n*
8. CUS$SCENARIO_DIR:GOM*kkk*_*jjjj*.E2 (5 files) where *kkk* is the swath identifier (ie, 120, 240, 360, 480 and 960 km), and *jjjj* is the cycle length.

9. CUS$SCENARIO_DIR:GOM_N_*jjjj*.E2
10. CUS$SCENARIO_DIR:GOM_S_*jjjj*.E2

2.1.1.7 Generate a new Scenario file

User profile	CUS System Manager, CUS Operations Planner
Connection	VT200
Start time	on request
Duration	30 minutes
Frequency	N/A
References	N/A
Related tables and files	N/A

Scope
When creating a new satellite phase, a new SCENARIO.E*n* (where n= 1,2 is the satellite number) file is required as first step.
Sequence of operations
Run the scenario generation tool by typing at VMS prompt SCENARIO_GEN;
Enter the data requested i.e.:

- the satellite identifier
- t e phase name
- the first orbit number
- the repeat cycle
- the cycle length
- the ascending node longitude
- the year
- the month
- the day

The program loops requiring again the data:

- the next phase name as above
- the first orbit number as above
- the repeat cycle as above
- the cycle length as above
- the ascending node longitude as above
- the year end of phase year
- the month end of phase month
- the day end of phase day

Then the program requires Back(-1) or Forward(+1) search and the operator has to interrupt it by CTRL-y;
The operator must edit the SCENARIO.E*n*, and replace the second line with the following data:

- 01nnnnnjjjjj00000000000000000000 (32 chars)

where: nnnnn = first orbit of the phase
jjjjj = total number of orbits in the phase
copy the SCENARIO.E*n* file to the directory CUS$SCENARIO_DIR if the current directory is different.

Output

Scenario.E*n* in the current directory

Notes

The creation of a Scenario file is required only during test phase as normally it is provided by ESTEC .
When extending an already existing phase, it is suggested to edit the already existing Scenario file (using EDIT/EDT VMS editor), appending to it the one more record for each new cycle. Each cycle record group os c;ear;y marked within the scenario file, and start date/start orbit values shall be updated. Before saving the file, update the second line just like displayed above, to put the correct number of orbits in the phase.

2.1.2 UPDATE DAYLIGHT_GEN .

User profile	CUS System Manager, CUS Operations Planner
Connection	VT200
Start time	on request
Duration	1 day
Frequency	N/A
References	see Daylight_Gen
Related tables and files	DAYLIGHT CFI Files : ORBITEVENT.E*n* where *n* =1,2)

Scope
(Describes the scope of the procedure.)
Input
(Describes the input (e.g. file) required by the procedure.)
Initial conditions
(Describes the conditions which must be matched before running the procedure.)
Sequence of operations
Copy the ECLIPSELIB.OLB to ECLZ (UNITS:[CF5Z.EC3Z]) Relink DAYLIGHT_GEN in all the executable environments
(i.e. CUSPRODEXE,CUSMAINTEXE,CUSINTEXE i.e. in the directory pointed by ECLIPSE [XXXXXXXXX.CFI.ECLIPSE]
using @ECLIPSE:ECLIPSE_LINK
Output
(Describes the output (e.g. files, etc) of the procedure.)
Error handling
(Describes possible errors and actions to be undertaken.)
Notes
The other CFI executables can be updated similarly and there is a DCL command file [XXXXXXXXXXX.CFI]RECONFIG_CFI.COM to relink all the CFI executables.

2.1.3 PEP GENERATION AND TRANSMISSION

User profile	CUS Mission Planner
Connection	VT200 or Workstation
Start time	Friday afternoon or on request (DPEP)
Duration	10 min.
Frequency	Weekly
References	
Related tables and files	

SCOPE
Generate and transmit to MMCC the PEP file, containing one week of planning data (four weeks ahead of operations) and/or the
changes to the planning data previously sent to MMCC (nominally the changes can only be related to activities at least one week in the future).
INPUT
Ranges of orbits for Mission Planner
INITIAL CONDITIONS
No planning operation in progress
SEQUENCE OF OPERATIONS
1)-From the CUS Operations Planner Menu choose:
Acquisition Planning and Monitoring
Distribute PEP
2)-Enter in the Operations Planner Form the Start Time for the execution of this procedure
3)-Enter the search criteria including the extreme Date and Time range covering all the orbits to be transmitted (also if some ranges need not to be transmitted)
4)-Remove from the list all the orbits which need not to be transmitted using the Clear Record key
5)-Enter in the Operations Planner Form the ranges of orbits in the Notes
6)-From the Menu Options choose:
Generate and Transmit PEP
7)-Verify that the file is moved to the ISS directory

OUTPUT
ERROR HANDLING
NOTES

2.1.4 DMOP INGESTION

User profile	CUS Mission Planner
Connection	VT200 or Workstation
Start time	on request
Duration	1 hour (depending on no. of orbits)
Frequency	Daily
References	
Related tables and files	

SCOPE
Ensure reception and correct processing of the various DMOP types:
-"unsolicited" DMOP (received before the corresponding PEP is sent and mainly containing data on orbits blocked for
manoeuvres and/or activities directly scheduled by MMCC) -DMOP (nominally one week of data in response to PEP) -DMOP/OIP (nominally for the coning 3 days, consolidating the
plan and providing more precise timing)
-Restituted DMOP (orbits where execution deviated from
planning: single orbits, at most one week after operations)
INPUT
INITIAL CONDITIONS
SEQUENCE OF OPERATIONS
1)-From the CUS Operations Planner Menu choose:
Monitoring
Monitor External Events
2)-Note down in the Notes of the Operations Planner Form the
name of the input DMOP file(s) together with the reception date and time
3)-For each of the received DMOP file perform the following steps:
a)-From the Monitoring Menu choose: Monitor Unusual Events
b)-Note down in the Notes of the Operations Planner Form the Unusual Event (if any) and take the appropriate corrective action
c)-From the Monitoring Menu choose: Monitor Blocked States
d)-Note down in the Notes of the Operations Planner Form the Blocked State (if any) and take the appropriate corrective action
e)-Verify in the CUS Log file the completion of the DMOP processing
f)-Note down in the Notes of the Operations Planner Form the DMOP processing completion together with the time
4)-Enter in the Operations Planner Form the End Time and the Completion Flag
OUTPUT

ERROR HANDLING

NOTES

Nominally each day, within 12h, the DMOP related to the coming 3 days of operations (OIP) should be received. This DMOP must be used for the generation of the station schedules, since the times it contains are more precise.

Daily the "restituted" DMOP should be received, describing the activities really performed (only for the orbits deviating from plan).

Nominally once a week a one week DMOP should be received in response to the PEP.

The DMOP is ingested and processed automatically by CUS as soon as received, on Automatic Event Scheduler trigger.

To be noted that MMCC will operationally keep transmission of unchanged orbits to CUS to a minimum.

2.1.5 PROVIDE ACQUIS PLAN TO WWW USERS

User profile	CUS Mission Planner
Connection	Workstation
Start time	9:00
Duration	0.5 hours
Frequency	every Wednesday
References	
Related tables and files	

SCOPE
Generate a Plot of the Acquisition Plan for the coming week and fax this Plot to a set of users and a special Zoom to Cotopaxi.
INPUT
INITIAL CONDITIONS
SEQUENCE OF OPERATIONS
1.) Login as Operations Planner
2.) if run from a terminal, the work station has to have the same account that the terminal session; then type:
SET DISPLAY/CREATE/NODE=ERSMPn
then type:
DISPLAY_TOOL
3.) Specify Satellite
4.) Specify that no file will be displayed
Specify acquisition and production frames will be displayed
5.) Select the orbit range starting next Monday for one week.
6.) Plot the graphic display
7) Run the xv tool on the graphic workstation and capture the screen, saving it to a .gif file

OUTPUT
gif images to be exposed on Earthnet WWW site
ERROR HANDLING
NOTES

2.2 Ground Station Management

2.2.1 OVERVIEW

Ground Station operations are based on the timely availability of data from MMCC and schedules from CUS.
MMCC will provide daily:
-MMCC Time Correlation Element (PATM): 10 files, one file
after each pass over Kiruna;
-Predicted MMCC Orbit (ORPM), early in the morning, after the
last of consecutive passes over Kiruna.
ISS will transmit to all stations the result of the conversion of the above files (shortly after their reception). That is, respectively:
-Time Correlation Element (PATC);
-Predicted Orbit (ORPD).
The temporal relation between the orbit prediction files, as well as their availability and respective coverage are roughly shown graphically below. It can be seen that two ORPC files will be generated from each ORPM file, after elimination of the
initial 14 records. Each file will contain 16 state vectors (100 minutes apart).
European Time
12 0 12 0 12 0 12 0 12 0 12 0 12
ÃÄÄÄÄÅÄÄÄÄÅÄÄÄÄÅÄÄÄÄÅÄÄÄÄÅÄÄÄÄÅÄÄÄÄÅÄÄÄÄÅÄÄÄÄÅÄÄÄÄÅÄÄÄÄÅÄÄÄÄÅÄÄÄÄ
´

Predicted MMCC Orbit
ÃÄÄÄÄ

CUS Schedules
ÃÄÄÄÄÄÄÄÄÄ´
ÀÄ CUS Schedules to stations
ESA STATIONS Kiruna (SAR + LBR)
ÃÄÄÄÄÄÄ´
Fucino (SAR)
Ã´
Maspalomas (SAR + LBR)
Ã´Ã´
Gatineau (LBR)
Ã´
Prince Albert (LBR) Ã´
NAT/FOR STATIONS Tromsoe (SAR)
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Gatineau (SAR)
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Fairbanks (SAR)
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European Time
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2.2.2 PRELIMINARY SCHEDULES' GENERATION .

User profile	ERS Operators
Connection	VTA200
Start time	10:00
Duration	15 mn
Frequency	every Wednesday
References	
Related tables and files	

Scope
Weekly generation of SAR Acquisition Preliminary Schedules for the Ground Stations for ERS-1/2.
These schedules are all sent by Fax to the stations.

Input
NA
Initial conditions
NA
Sequence of operations
For manual schedule generation:
1) Note down in the Operator's Form the Start Time (for the execution of this procedure).
2) Connect to CUS, first by entering the command:
- C ERSISS
- and Logon with username XXOP0001, Password ....
- and then by setting host to ERSCUS using:
- SET H ERSCUS
- and Logon with username XXOP0001, Password ....

3) Generate the preliminary Schedules by entering the command:
- RUNFORMORAPROD/ORAPROD @NFS

Wait until the VMS prompt ("OP_1") comes back (from 2 to 20 minutes).
4) The schedules are printed automatically on the laser printer in EECF Mission Planning office (browse)
5) Logoff ERSCUS machine by typing:
- LO

6) Logoff ERSISS machine by typing:
- LO

7) Fax a copy of each schedule to the correct station (the station code is on the top left of each page).
Note that a station might have the file NFS.LIS, in the home directory of user XXOP0001.

Error handling
NA
Notes
For Cotopaxi a plot of the next week's coverage shall be attached.

2.2.3 SCHEDULES' GENERATION .

User profile	ERS Operators
Connection	VT200
Start time	12:00 UTC
Duration	6 min.
Frequency	Daily
References	Doc. R-1, Chapter 7.2.1
Related tables and files	

Scope
The Schedule Generation is normally handled by the CUS Automatic Event Scheduler. The following procedure is only used if it is necessary to manually transfer the schedules (ie. AES is not running).
Input
(Describes the input (e.g. file) required by the procedure.)
Initial conditions
NOTE: THIS IS THE FIRST PROCEDURE IN THE DAILY GENERATION, TRANSFER AND FAXING OF SCHEDULES
Sequence of operations
1) Note down in the Operator's Form the Start Time (for the execution of this procedure).
2) Connect to CUS, first by entering the command:
C ERSISS
and Logon with username ISS$OPER, Password ....
and choose option: VMS commands
and then by setting host to ERSCUS using:
SET H ERSCUS
and Logon with username XXOP0001, Password ....
3) In order to inform other ERSCUS users of the pending schedule generation, enter:
@SYS$LOGIN:WARN_USERS
After entering this command, you will get messages back which tell you how many terminals have received our message.
Proceed immediately to the next step.
4) Process any existing ORRS files by switching to the CUS maintenance directory, entering:
GO CUSPROD$DISK:[CUSPROD.TCS.RECEIVE]
Look for any files that start with the 4 letters: ORPD,
using:
DIR ORPD*.*/DATE

If no ORPD files were found, proceed to step 12.
5) If more than one ORPD file is found, each of the files must be processed in turn.
Copy the oldest file (the one with the earliest date or the lowest Cyclic Counter value) into CUS input directory using:
COPY ORPD_xxxxxxxxxxxx.E1 MMIP_XORD_QUEUED_DIR:/LOG
where xxxxxxxxxxxxx is the file name substring of the chosen input file.
6) Enter the commands:
HOME
START_PROC
21
Y
This should start a detached process called MMIP_XORD_xxxx, where xxxx is a number - write it down, you will need it in the next two steps.
NOTE:If this process does not start up correctly, then enter:
CLEAN_PROC
and answer YES to any questions and repeat this step again.
7) In order to monitor the progress of the process, enter: JPI MMIP_XORD_xxxx
The progress of the process will be displayed on your terminal. When the process is finished, the OP$ cursor will be displayed on your screen. Go to the next step. If the JPI program crashes, proceed.
If the message: NON-EXISTENT PROCESS appears when you type the above command, then the process is already finished. Go to the next step.
8) Enter the commands:
GO MMIP_XORD_LOG_DIR
RED MMIP_XORD_xxxx.ERR
where xxxx is the number from step 6.
9) You are now reading the errorlog. Use the "PAGE DOWN" key to look through the whole file for errors. You can exit from this file using first the PF1 key and then "Q". Repeat for all processes started for each of the processed files.
10) In case of any errors in the errorlog, then do not proceed further, that is: STOP! Call the operations manager.
11) If any more files were found in step 4, repeat steps 4 to 10 for the next most recent file until all the files have been processed.
12) Now process any existing ORRS files by switching to the CUS maintenance directory, entering:
GO CUSPROD$DISK:[CUSPROD.TCS.RECEIVE]
Look for any files that start with the 4 letters: ORRS,
using:
DIR ORRS*.*
If no ORRS files are found, go to step 14.
If any files are found, copy all of them into the CUS input directory using:
COPY ORRS*.E1 MMIP_XORD_QUEUED_DIR:/LOG
All ORRS files are processed at the same time.
13) Perform steps 6 to 10 to process the ORRS file(s).
14) To start the process which generates the schedules, enter: HOME
START_PROC
28

Y
This will start a detached process called SCGP_XGAS_xxxx where xxxx is a number - write it down, you will need it in the next step.
NOTE:If this process does not start up correctly, then enter:
CLEAN_PROC
and answer YES to any questions and repeat this step again.
15) In order to monitor the progress of the process, enter:
JPI SCGP_XGAS_xxxx
The progress of the process will be displayed on your terminal. When the process is finished, the OP$ cursor will be displayed on your screen. Go to the next step. If the JPI crashes, proceed.
If the message: NON-EXISTENT PROCESS appears when you type the above command, then the process is already finished. Go to the next step.
16) Enter:
GO SCGP_XGAS_LOG_DIR
RED SCGP_XGAS_xxxx.ERR
where xxxx is the number of the previous step.
If you do not have the number xxxx, type the following to obtain the name of the file most recently created:
DIR/SIN SCGP_XGAS_*.ERR
17) You are now reading the errorlog. Use the "PAGE DOWN" key to look through the whole file for errors. You can exit from this file using first the PF1 key and then "Q".
18) If you saw any errors in the errorlog, then do not proceed further, that is: STOP! Call the operations manager.
If not, then enter:
HOME
DIR SCHEDULE_DIR:
You should see a list of all the schedules that you have generated. There are three types; they start with either: SHAQ, SHPN or SHDS as the first 4 letters.
19) Logoff twice; first from ERSCUS, then from ERSISS.
20) Note down in the Operator's Form the End Time, the Completion Flag and eventually notes on the operation.

Output

(Describes the output (e.g. files, etc) of the procedure.)

Error handling

(Describes possible errors and actions to be undertaken.)

Notes

(Any useful information not covered before.)

2.2.4 SCHEDULES' EDITING .

User profile	CUS Mission Planner
Connection	VT200
Start time	after schedule generation
Duration	dependent on changes
Frequency	Daily (when necessary)
References	Doc. R-1, Chapter 7.3.4
Related tables and files	

SCOPE
Edit the system generated Acquisition, Processing andDistribution Schedules.
INPUT
Authorised request for change
INITIAL CONDITIONS
This procedure must be followed only if really necessary and any change must be carefully verified, since the system does not perform any check on the manual changes.
SEQUENCE OF OPERATIONS
1) From the CUS Operations Planner Menu choose:
- Acquisition Planning and Monitoring
- Monitor Ground Segment
- Edit Schedules

2) Edit the schedules which require changes
3) Note down in the Notes of the Operations Planner Form the identifier(s) of the affected schedules and the End Time.
OUTPUT
A hard copy of the authorised request for change must be filed in the Operations Log Book.
ERROR HANDLING
NOTES
CUS generates the stations schedules automatically at a pre-defined time of the day (see CUS Parameters). After their generation the schedules can be manually modified within a pre-defined time window (see CUS Parameters).

2.2.5 SCHEDULES' GENERATION ERROR CHECKING

User profile	ERS Operators
Connection	VT200
Start time	13:00 UTC
Duration	several minutes
Frequency	Daily
References	
Related tables and files	SGCP_XGAS_xxxx.ERR

Scope
Confirm successful generation of Acquisition, Processing and Distribution Schedules by the CUS Automatic Event Scheduler.
Input
NA
Initial conditions
This procedure must be followed on a daily basis when the CUS Automatic Event Scheduler is running. Since the schedules' generation and transmission are essential to operations, this procedure acts as a final level of confirmation that all has been successfully processed.
(Describes the conditions which must be matched before running the procedure.)
Sequence of operations
1) Note down in the Operator's Form the Start Time (for the execution of this procedure).
2) Connect to CUS, first by entering the command:

- C ERSISS
- and Logon with username ISS$OPER, Password ....
- and choose option: VMS commands
- and then by setting host to ERSCUS using:
- SET H ERSCUS
- and Logon with username XXOP0001, Password ....

3) Check the schedule generation errorlog. Enter: CHECK_XGAS_ERR

- If you receive the message: NO FILE FOUND

or

- If you receive the message: ERRORS FOUND

Then STOP! and call the mission planner (x 703) or an MDA staff (x 326, x 327, x 409) and tell them errors were found in the schedule generation.
If you receive the message: SCHEDULE GENERATION OK
Then all is normal. Continue to next step.

4) Logoff twice; first from ERSCUS, then from ERSISS.
5) Note down in the Operator's Form the End Time, theCompletion Flag and eventually notes on the operation.

Output

(Describes the output (e.g. files, etc) of the procedure.)

Error handling

(Describes possible errors and actions to be undertaken.)

Notes

(Any useful information not covered before.)

2.2.6 SCHEDULES' TRANSMISSION ERROR CHECKING

User profile	ERS Operators
Connection	VT200
Start time	15:30 UTC
Duration	several minutes
Frequency	Daily
References	
Related tables and files	SGCP_XTAS_xxxx.ERR

Scope
Confirm successful transmission of Acquisition, Processing and Distribution Schedules by the CUS Automatic Event Scheduler.
Input
NA
Initial conditions
This procedure must be followed on a daily basis when the CUS Automatic Event Scheduler is running. Since the schedules' generation and transmission are essential to operations, this procedure acts as a final level of confirmation that all has been successfully processed.
Sequence of operations
1) Note down in the Operator's Form the Start Time (for the execution of this procedure).
2) Connect to CUS and Logon with username XXOP0001, Password ....
3) Check the schedule generation errorlog. Enter: CHECK_XTAS_ERR
- If you receive the message: NO FILE FOUND

or

- If you receive the message: ERRORS FOUND

Then STOP! and call the mission planner (x 703) or an MDA staff (x 326, x 327, x 409) and tell them errors were found in the schedule transmission.If you receive the message: SCHEDULE TRANSMISSION OK
Then all is normal. Continue to next step.
4) Logoff twice; first from ERSCUS, then from ERSISS.
5) Note down in the Operator's Form the End Time, the Completion Flag and eventually notes on the operation
Output
(Describes the output (e.g. files, etc) of the procedure.)
Error handling
(Describes possible errors and actions to be undertaken.)
Notes

(Any useful information not covered before.)

2.2.7 PROCESS ACQUISTION REPORTS

User profile	ERS Mission Planner
Connection	VT200
Start time	Daily 3 PM UTC
Duration	appr. 10 min.
Frequency	Daily
References	
Related tables and files	

Scope
This process is normally started by the CUS Automatic Event Scheduler. The following procedure is only used if it is necessary to manually transfer the schedules (ie. AES not running).CUS processing of incoming Acquisition Reports (REAQ) files.
Input
Acquisition Report (REAQ) files
Initial conditions
None
Sequence of operations
1) Connect to CUS and logon with username XXOP0001 and password.
2) Copy any REAQ requested explicitely to process to the GSIP_XACQ_QUEUED_DIR
3) Check that there are files in the acquisition reports queued directory:
DIR GSIP_XACQ_QUEUED_DIR:
If no files are found, go to STEP 9).
4) To process the queued Acquisition Report files, enter:

- HOME
- START_PROC
- 22
- Y

This should start a detached process called GSIP_XACQ_nnnn where nnnn is a 4-digit number -- write it down. You will need it in the following steps.
If you accidentally type 'N' instead of 'Y', then do the following:
DEFINE ERRORLOG GSIP_XACQ_LOG_DIR:GSIP_XACQ_nnnn.ERR where "nnnn" is the 4-digit number noted before and then RUN/NODEBUG GSIP_XACQ_IMAGE
and wait for the command to finish. In this case you can't use the JPI command (STEP 8) so skip to STEP 9.
NOTE: If the GSIP_XACQ_nnnn process does not start up correctly, then enter:

- CLEAN_PROC

- and answer YES to any questions and repeat this step again.

5) The error checking occurs automatically. The XXOP0001 useris informed by MAIL if errors are found.

Output

Errorlog in directory:file GSIP_XACQ_LOG_DIR:GSIP_XACQ_nnnn.ERR.

Error handling

Consult with MDA staff, who will take appropriate action. NOTES

Notes

(Any useful information not covered before.)

2.2.8 ACQUISITION UPDATE PROCESSING .

User profile	CUS Mission Planner
Connection	VT200
Start time	20:00 PM UTC
Duration	10 minutes (process runs about 6 hrs)
Frequency	Daily
References	
Related tables and files	*.En files REDP_*.En files AUPP_XACQ_nnnn

Scope
The Acquisition Update process is normally started by he CUS Automatic Event Scheduler. The following procedure is only used if it is necessary to start up the process manually (ie. AES is not running).
CUS acquisition updating process, including processing of restituted DMOPs and distribution reports.
NOTE: Since this process runs for many hours, it is started at 21:00 PM UTC, nightly, and then error checking occurs the following morning by the mission planner.

Input
Distribution Report (REDS) files
Restituted DMOP Report (REDP) files

Initial conditions
1. Ensure that the Acquisition Report Processing has been completed (previous procedure). This should be run daily at 20:00 UTC. If the AES is running, the Acquisition Reports are processed upon arrival from ISS.
2. The mission planner will inform the operators if there are any conflicts in starting this process at 20:00 UTC

Sequence of operations
1) Connect to CUS and logon with username XXOP0001 and password.
2) To start the process, enter:

- HOME
- START_PROC
- 30
- Y

This should start a detached process called AUPP_XACQ_nnnn where nnnn is a 4-digit number -- write it down. You will need it in the following steps.If you accidentally type 'N' instead of 'Y', then do thefollowing:

- DEFINE ERRORLOG AUPP_XACQ_LOG_DIR:AUPP_XACQ_nnnn.ERR where "nnnn" is the 4-digit number noted before and then RUN/NODEBUG AUPP_XACQ_IMAGE and wait for the command to finish..In this case you can'tuse the JPI command (STEP 7).
- Notify MDA staff or mission planners so that they can ensure that the process has now been started. Skip to STEP 8).

NOTE: If the AUPP_XACQ_nnnn process does not start up correctly, then enter:

- CLEAN_PROC

and answer YES to any questions and repeat this step again

Output

Errorlog in directory:file AUPP_XACQ_LOG_DIR:AUPP_XACQ_nnnn.ERR. ERROR HANDLING Consult with CUS TEam staff or mission planners, who will take appropriate action.

Error handling

(Describes possible errors and actions to be undertaken.)

Notes

The mission planner may require the process name AUPP_XACQ_nnnn on the following morning in order to handle error checking. Ensure this will be available.

2.2.9 ACQ./POST-ACQ. UPDATE ERROR CHECKING .

User profile	Technical support
Connection	VT200
Start time	8h30-9h00
Duration	N/A
Frequency	Daily, every morning
References	
Related tables and files Selection....tables	REDS_*.En files REDP_*.En files, EXTDD_late_orbit_entry table Catalogue/Product Journal/Sensing Orders/Orbit
Process Name	AUPP_XACQ_nnnn/AUPP_XPAU_nnnn

Scope

The error checking normally occurs automatically after Acquisition Update and Post-Acquisition Update processing. If errors are found, a mail message is sent to the XXTS0001 account.

The mail is systematically read every morning (at least) by the Technical Support staff which **starts the corrective actions immediately.**

Support can be done by the CUS Maintenance team.

Input

Acquisition Updating errorlogs (AUPP_XACQ_nnnn.ERR/AUPP_XPAU_nnnn.ERR) and XXTS0001 mail e.g.:

```
------------------------------------------------------------------------
From:       PROCUS::CUSPROD      "AES is watching you"
To:         XXTS0001
CC:
Subj:       Acquisition Update Processing Errors

See cuserrlg for details:

AUPP_XACQ_LOG_DIR:AUPP_XACQ_6606.ERR
------------------------------------------------------------------------
and
------------------------------------------------------------------------
From:    PROCUS::CUSPROD      "AES is watching you"
To:      XXTS0001,XXPP0001
CC:
Subj:    Post-Acquisition Update Processing Errors

See cuserrlg for details:
```

```
AUPP_XPAU_LOG_DIR:AUPP_XPAU_1844.ERR
--------------------------------------------------------------------------------
```

Initial conditions

N/A

Sequence of operations

- Connect to XXTS0001 and type the command MAIL. Mails not yet processed are either in the NEWMAIL or MAIL folder.
- from the mail information, you can edit the file: RED AUPP_XACQ_LOG_DIR:AUPP_XACQ_nnnn.ERR or

RED AUPP_XPAU_LOG_DIR:AUPP_XACQ_nnnn.ERR (where nnnn is a cyclic counter).
where nnnn is the number of the process you see in the mail.
(if you user TPU editor, to improve readability and/or increase the column size of the screen, use the PF1 key followed by "W".)
Search for processing errors by pressing the FIND key and entering the search string "error " (followed by RETURN). To hop to the next "error " string, press the PF3 key. If this string is not found, you will see the message "String not found" at the bottom of the screen.
If the error message appears in a line which begins with *%GSD-I-INFO*, this message can be ignored.
Other errors must be immediately reported to the CUS Maintenance team.

- move the mail to the CUS_PROC folder once all actions have been completed

Output

N/A

Error handling

N/A

Notes

N/A

2.2.10 MANUAL TRANSFER OF SCHEDULES TO ISS .

User profile	CUS Mission Planner
Connection	VT200
Start time	15:00 UTC
Duration	a few minutes
Frequency	Daily
References	Doc. R-1, Chapter 7.2.1
Related tables and files	

Scope
The Schedule Transfer is normally handled by the CUS Automatic Event Scheduler. This procedure is only used if it is necessary to manually transfer the schedules (ie. AES is not running).
However, the error checking (STEP 5) of this procedure must be performed by the operators on a daily basis.
Ensure that CUS (generated and) transferred to ISS the Acquisition and Processing Schedules for all involved stations and the Distribution Schedules for ISS (LBR FDPs) or for NSC (SAR FDPs).
(
Input
(Describes the input (e.g. file) required by the procedure.)
Initial conditions
NOTE: BEGIN THIS PROCEDURE ONLY AFTER SCHEDULE GENERATION CUS OP-MAN PROCEDURE #4.2.4
Sequence of operations
NOTE: THIS IS THE SECOND PROCEDURE IN THE DAILY GENERATION, TRANSFER AND FAXING OF SCHEDULES
1) Connect to CUS and Logon with username XXOP0001, Password ....
2) Enter the command:

- HOME
- START_PROC
- 29
- Y

This will start a detached process called SCGP_XTAS_xxxx where xxxx is a number - write it down.

- NOTE:If this process does not start up correctly, then enter:
- CLEAN_PROC

and answer YES to any questions and repeat this step again.
3) Enter:

- GO SCGP_XTAS_LOG_DIR
- RED SCGP_XTAS_xxxx.ERR
- where xxxx is the number from the last step.

If you do not have the number xxxx, enter the following command to get the name of today's file:

- DIR/SIN SCGP_XTAS_*.ERR

6) You are now reading the errorlog. Use the "page down" key to look through the whole file for errors. You can exit from this file using first the PF1 key and then "Q".
7) If you saw any errors in the errorlog, then do not proceed further, that is: STOP! Call the operations manager.

- If not, then enter:
- HOME
- DIR SCHEDULE_DIR:

The message "no files found" should be received. The files have now been transmitted to ISS.

Output

NA

Error handling

When a problem is detected, file its description in the Operation Log Book and inform the Operations Manager.

Notes

CUS generates the stations schedules automatically at a pre-defined time of the day (see CUS Parameters). After their generation the schedules can be manually modified within a pre-defined time window (see CUS Parameters).

2.2.11 UPDATE GROUND STATION DATA

2.2.11.1 Overview

The information used by CUS concerning ground stations, their location and coverage, the data links, the processing capacities and the unavailability is stored in several CUS tables and files.
The only form in the user interface which updates the GSPDD_ground_station_desc table is the Ground Station Data Detail form, PSDAF_gsdatadetail. Only some of the columns of this table are updatable from the form, because it is considered a major change to modify the others, and thus is considered something that a "system manager" would do via SQLPLUS.
A ground station needs to be defined in the: -XXX HOOPS file for graphical display of the coverage mask
-Station.DBF file
-Station.LST file
-GS_LINK_AOD table
-GSPDD_ground_station_desc table
-GSPDD_gs_dl table
-PRMDJ_facility table
-DOBDD_gs_priority table for ESA stations
The station visibility is calculated off-line using the program VISIBILITY_GEN, which uses the STATION.DBF file and the table GS_LINK_AOD.
The graphical station display needs to be updated running HZ_MASK which also reads the STATION.DBF.
A HOOPS metafile needs to be generated for display.

2.2.11.2 *Add a ground station in CUS tables*

User profile	CUS System Manager, CUS Operations Planner
Connection	VT 200
Start time	on request
Duration	
Frequency	N/A
References	
Related tables and files	CUS tables: DOBDD_gs_priority table/ESA stations FDFDD_def_fd_gs table/ESA stations FUNDD_facility_unavail table GSPDD_ground_station_desc table GSPDD_gs_dl table PRMDJ_facility table STATION.DBF file STATION.LST file

Scope

New stations might become available with time. In this case the station might be:

- -either already defined in the CUS database, but flagged as unavailable and still displayed on the screen (basemap display),
- -or it must be added with all related information.

The defined stations, available or not, and some of the station parameters can be listed via the CUS application menus and forms.

For table updates a specific procedure shall be used.

Input

(Describes the input (e.g. file) required by the procedure.)

Initial conditions

(Describes the conditions which must be matched before running the procedure.)

Sequence of operations

1)-Edit STATION.DBF and STATION.LST files (add definition for each new ground station).

2)-Add records to CUS tables GSPDD_ground_station_desc, GSPDD_gs_dl, PRMDJ_facility (and to DOBDD_gs_priority and FDFDD_def_fd_gs tables if ESA ground stations).

3)-Re-run VISIBILITY_GEN for new ground stations, thereby updating VISIBILITY table.

4)-Re-validate GAP orbits.

Output

(Describes the output (e.g. files, etc) of the procedure.)

Error handling

(Describes possible errors and actions to be undertaken.)

Notes
(Any useful information not covered before)

2.2.11.3 Update AOS/LOS elevations

User profile	CUS System Manager, CUS Operations Planner
Connection	VT200
Start time	on request
Duration	15 minutes
Frequency	N/A
References	
Related tables and files	CUS tables and files: GS_LINK_AOD table STATION.DBF file VISIBILITY table

Scope
Update the station visibility, used for the calculation of sensing segments.
Input
(Describes the input (e.g. file) required by the procedure.)
Initial conditions
(Describes the conditions which must be matched before running the procedure.)
Sequence of operations
1)-Edit STATION.DBF
2)-Update STATION.DBF
Note, that some stations (Gatineau and Prince Albert) are described twice as high rate (GH and PH) and as LBR stations (GS and PS).
3)-SQL
4)-Update the table GS_LINK_AOD.
5)-Run VISIBILITY_GEN with the user-name of the account the VISIBILITY table is to be written to.
6)-Run CUS and re-validate the GAP with new VISIBILITY table.
7)-Verify user requests, which could be invalid after GAP validation.
8)-Update GAPDD_GS_info Table (running CFE) (TBC).
Output
(Describes the output (e.g. files, etc) of the procedure.)
Error handling
(Describes possible errors and actions to be undertaken.)
Notes
The visibility start and stop times used by CUS are calculated off-line running the program VISIBILITY_GEN, which calls MODULE2M.

The output values of VISIBILITY_GEN are written in the VISIBILITY table in the data environment specified by the user-name.
The station elevation angles used by VISIBILITY_GEN have to be verified at 2 places:
- in the STATION.DBF file (e.g. 50000 = 5 deg) as circle
- in GS_LINK_AOD table (e.g. L1 start 5 deg stop 2 deg L2 start 2 deg stop 2 deg
The higher value of the two is the shorter visibility segment to be used as the output value written in the VISIBILITY table. In the above example, for both L1 and L2, the visibility would be calculated from 5 to 5 degrees, since this is specified in the STATION.DBF file.
Ideally the values in STATION.DBF would all be set to the lowest value, then the visibility is controlled always through the GS_LINK_AOD table. The visibility information to be used per station, has to be synchronized with MMCC.

2.2.11.4 Generate Station Visibility

User profile	CUS System Manager CUS Operations Planner
Connection	VT200
Start time	on request
Duration	15 minutes
Frequency	N/A
References	Doc.s R-2, R10 Mission Planning CUS Software
Related tables and files	CUS tables and files: CFI table GS_LINK_AOD CFI table VISIBILITY STATION.DBF file

Scope
Update the station visibility, used for the calculation of sensing segments.
Input
(Describes the input (e.g. file) required by the procedure.)
Initial conditions
Access privilege (insert and delete) to the CFI VISIBILITY table.
Access privilege (select) to the table GS_LINK_AOD.
The logical "STATIONS" shall point to the appropriate STATION.LST file.
The logical ERS1CFE$DIR must point to the directory that holds the files opened by MODULE2M.
Sequence of operations
1)-Run VISIBILITY_GEN, as described in the user guide.
Output
(Describes the output (e.g. files, etc) of the procedure.)
Error handling
see User Guide
Notes
1)-CUS doesn't use the various station parameters such as latitude or longitude coordinates and coverage elevation values directly for planning. Those station parameters are read in from the STATION_PROFILE_FILE (matching theSTATION.DBF used by the CFI software, namely VISIBILITY_GEN) using the PEP_STATION_ID of the Oracle table.
GSPDD_ground_station_desc and are only used in the PEP generation. Although CUS doesn't use the various station parameters directly, any change of those parameters will affect the station RF and link visibilities and indirectly some of the GAP activities already planned may be invalidated. The actual

changes will be used by CUS through the CFI database, namely the VISIBILITY table of the SQL_CFI_ACCOUNT for all planning or validation in future.
2)-In general, whenever the station visibilities change (caused by changes in the horizon profile, antenna location or the link elevation angles (ELEVATION_ACQ, ELEVATION_LOSS of table GS_LINK_AOD)), the associated orbits should be extracted and re-validated after the VISIBILITY table has been updated (by running VISIBILITY_GEN). This should be done whenever a new station unavailability report has been received by CUS.
3)-The ground station information is stored in a number of files or database tables. The STATION.DBF is mainly used by the CFI software to generate the link visibilities and the results are stored in the CFI Oracle VISIBILITY table. The CFI software also gets the link acquisition elevation angle from the GS_LINK_AOD table which CUS never reads or checks, and the list of stations from the STATION.LST file (which should be consistent with the PEP_STATION_ID and FACILITY_ID in the corresponding GSPDD_ground_station_desc table used by CUS. However, the CFI software never needs to know anything about the station subsystem (SAR processors, FDPC subsystem etc.) which are used by CUS in planning and generation of schedules for the station.
4)-There are a maximum of four pairs of start and stop times stored in the CUS GAPDD_gs_info table, namely the RF mask, one occultation period, link-I mask and link-II mask. They are initialized from the values obtained from the VISIBILITY table. However, the link-I and link-II mask may be adjusted according to previous operations initiated by the Operations Planner through the Orbit Display Folder.
5)-A word of warning: all new stations should be added to the CUS Oracle tables first before the CFI VISIBILITY table. The PEP_STATION_ID, FACILITY_ID, HEMISPHERE of GSPDD_ground_station_desc should be matching with STATION.DBF and STATION.LST. The CFI GS_LINK_AOD table should be matching with the CUS GSPDD_GS_DL table.
6)-Changes to station parameters:
Populate or regenerate the VISIBILITY table whenever changes affect the occultation period, RF and link masks of the station (this includes changes to the GS_LINK_AOD table also). Depending on the actual change, a new CFI account should be used for populating the updated VISIBILITY table and change logical SQL_CFI_ACCOUNT after the new table has been created and confirmed corrected. It is best to have SQL_CFI_ACCOUNT as a group logical and stop all planning during the switch.
7)-Station visibility is per 'PASS' (i.e a possibility of two passes within one physical orbit) and the pass is identified by satellite, phase, orbit, ground station and pass_id (-1, 0 or + 1) internally within CUS data structure (gs_coverage).

2.2.11.5 *Update Basemap Display (Station Location & Coverage)*

User profile	CUS System Manager CUS Operations Planner
Connection	VT200
Start time	on request
Duration	15 minutes
Frequency	N/A
References	
Related tables and files	

Scope
Add new stations to the basemap display.
Input
(Describes the input (e.g. file) required by the procedure.)
Initial conditions
(Describes the conditions which must be matched before running the procedure.)
Sequence of operations
a)-If a change to the basemap (eg. the GS coverage circles) must be made, the following steps should be followed:
1)-Update the corresponding WBD files(eg.BMMG_gs_coverage.bdy) and copy them to directory CUS_MAP_DATA.
2)-Run BMMG_XBLD and select "Rectangular" after the utility is invoked.
3)-After the basemap completes drawing/generation (this will take upwards of 20 - 30 mins), select exit to save the basemap metafile.
The metafile:
HOOPS_METAFILES:BMMG_RECTANGULAR_BASEMAP.HMF is created.
4)-Repeat 2 and 3 for the "North Polar" projection. Themetafile:
HOOPS_METAFILES:BMMG_POLAR_NORTH_BASEMAP.HMF is created.
5)-Repeat 2 and 3 for the "South Polar" projection. The metafile:
HOOPS_METAFILES:BMMG_POLAR_SOUTH_BASEMAP.HMF is created.
6)-Run CUS to see changes. The changes are visible in either the Geo Area Edit, Observation Set Selection or the UR Subset folder graphics applications.
b)-If it is needed a "coarse" copy of the basemap(s) update BMMG_SAMPLE_RATES.DAT, increase the sampling interval and invoke BMMG_XBLD.
Output
(Describes the output (e.g. files, etc) of the procedure.)

Error handling
(Describes possible errors and actions to be undertaken.)
Notes
HOOPS Metafiles

CUS uses HOOPS metafiles to display the following basemap elements:

- - map coasts
- - political boundaries
- - ground station locations and coverage "circles"
- - sea-ice boundaries
- - international date line

Metafiles are opened and read the first time graphics is entered or if the projection is changed by the user. The metafile is the HOOPS way of describing a set of polylines. It is in ASCII but should not be modified via a text editor. If any of the above basemap characteristics change, the metafiles should be regenerated using the utilities described below.
There are three CUS metafiles corresponding to the three types of projections supported by CUS and located in the directory HOOPS_METAFILES:

- BMMG_POLAR_NORTH_BASEMAP.HMF
- BMMG_POLAR_SOUTH_BASEMAP.HMF
- BMMG_RECTANGULAR_BASEMAP.HMF

BASEMAP GENERATION/VIEWING UTILITIES ----------
There are two basemap utilities used for generating and viewing basemap metafiles: BMMG_XVUE.EXE AND BMMG_XBLD.EXE. They are located under the CUS_TOOLS directory.
The BMMG_XVUE program is an interactive basemap viewing utility. It reads one of the HOOPS basemap metafiles and allows the user to view it using zoom and pan commands. The basemap metafile viewed corresponds to the projection type selected when the user first invokes the utility.
The BMMG_XBLD program is an interactive basemap creation and viewing utility. It reads the appropriate basemap data (WDB II format) from a file on disk (in directory "CUS_MAP_DATA"), converts this data into a HOOPS segment tree, and then lets the user view it using zoom and pan commands. The user selects the projection type when he invokes the utility and has the option of creating/saving the relevant basemap metafile when he exits.
BMMG_XBLD INPUT FILES

The BMMG_XBLD utility reads a set of World Databank II (WDB) files as input to create the HOOPS metafiles. The data for these files were originally provided by ESA although they were slightly corrected in some cases.
These are ASCII files and can be quite big. There are three sets of WDB files:

- - *.CIL files which generally correspond to coast boundaries
- - *.BDY files which correspond to political boundaries
- - *.LOC file which corresponds to locations (currently only GS locations)

All files should be placed in the directory CUS_MAP_DATA before executing the utility. They are usually located in BMMG.
BMMG_ASIA.CIL - Asia Coast
BMMG_EUROPE_AFRICA.CIL - Europe/Africa Coast

BMMG_NORTH_AMERICA.CIL - North America Coast
BMMG_SOUTH_AMERICA.CIL - South America Coast
BMMG_APR_JUN_ICE.BDY - April to June Sea/Ice Boundaries
BMMG_ASIA.BDY - Asia Political Boundaries
BMMG_DATE_LINE.BDY - International Date Line
BMMG_EUROPE_AFRICA.BDY - Europe/Africa Political Boundaries BMMG_GS_COVERAGE.BDY - Ground Station Coverage Circles
BMMG_JAN_MAR_ICE.BDY - Jan to Mar Sea/Ice Boundaries
BMMG_JUL_SEP_ICE.BDY - July to Sept Sea/Ice Boundaries
BMMG_NORTH_AMERICA.BDY - North America Political Boundaries BMMG_OCT_DEC_ICE.BDY - Oct to Dec Sea/Ice Boundaries
BMMG_SOUTH_AMERICA.BDY - South America Political Boundaries
BMMG_GROUND_STATIONS.LOC - Ground Stations locations (marked by '+')
In addition to these files BMMG_XBLD also reads a sampling rate definition file (BMMG_SAMPLE_RATES.DAT) which controls how the WBD data is subsampled for metafile generation since the WBD data is often far too detailed for CUS.
The following parameters are defined:
1 ! date line dessimation
5 ! detail coast dessimation
200 ! rough coast dessimation
5 ! political bdy dessimation
1 ! ice bdy dessimation
1 ! ground station coverage dessimation
Note the parameter "detail coast dessimation" does NOT correspond to the coarse basemap but refers to the "rougher" version visible at low zoom ratios.

2.3 *PAF Management*

2.3.1 PAF INTERFACE

a)-When it is necessary to cancel an order already transmitted to the PAF, a mail message must be used.
b)-Cancellation of a Product Order should be handled carefully, because a part of the User Request might not be satisfied any more.

2.3.2 PROCESS ARCHIVE REPORTS

User profile	Production Planner
Connection	VT200
Start time	See Operator Time Schedule
Duration	depends on number and size of archiving reports
Frequency	Daily
References	
Related tables and files	CATDD_prod_catalogue , CATDD_unpr_catalogue , REARs reports
Process Name	HLIC_XARC_nnnn

Scope
CUS processing of incoming Archive Report (REAR) files. Processing of Archive Reports is normally started by the CUS Automatic Event Scheduler.
The following procedure is only used if reports must be processed manually.
Input
Archive Report (REAR) files
Initial conditions
The Acquisition Update (AUPP_XACQ), Post- Acquisition Update (AUPP_XPAU) and Product Order Preparation (PPIO_XROP) processes must not be running at the same time as Archive Report processing. If either process is running wait for them to finish before starting Archive Report processing.
Sequence of operations
1) Connect to CUS with an operational username/password
2) Check that there are new REARs to be processing typing: DIR WAITING_REAR_DIR
3) Ensure initial conditions.
Enter: PROCESSES
This produces a display on the screen and if either of the above-mentioned processes are running.

If either process is running then either wait until it is finished.
4) Inform other users of your intent to start processing Archive Reports.

- Enter the command : START_PROC
- A menu will be displayed, Enter: 14 (i.e. option 14: archive_rpt)
- the following text will be displayed:

```
Process type:                PRMSE_ARCHIVE_RPT
Type 'Y' if you want to start the detached process
```

- Enter: Y. This should start a detached process called HLIC_XARC_nnnn where nnnn is a 4-digit number -- write it down. You will need it in the following steps.

NOTE:
-> If the HLIC_XARC_nnnn process does not start up correctly i.e. the following message is not displayed

```
*** Successful completion ***
```

then Enter: CLEAN_PROC and answer YES to all questions and repeat this step again.
-> If you accidentally type 'N' instead of 'Y', then run CLEAN_PROC as above, log out and start again from Step 1).
5) Inform other users that Archive Report processing has completed:
6) The errorlog is checked automatically. The XXTS0001 and XXPP0001 user accounts are informed by MAIL if errors are found.
7) If errors are found then check with the Technical Support staff that the errors will be handled.

Output

Errorlog in directory:file HLIC_XARC_LOG_DIR:HLIC_XARC_nnnn.ERR.
mail sent to XXTS0001 and XXPP0001 if errors occurred.

Error handling

Inform CUS Team about any error reported.

2.3.3 PRODUCT ORDER PREPARATION .

User profile	CUS Production Planner
Connection	VT200
Start time	See Operator Time Schedule
Duration	~ 5 minutes
Frequency	Daily (After Archive Report processing)
References	
Related tables and files	CATDD_unpr_catalogue PRJDD_product_journal
Process Name	PPIO_XROP_nnnn

Scope
The Product Order Preparation process does two things:
- Updates WAITING product journals to READY if all the frames in the product journal series have been archived (the reason for running this process AFTER Archive Report processing). The Production Planner may now be able to generate more Product Orders.
- Updates certain GS-PAF SAR unprocessed catalogue frames from ACQUIRED to ARCHIVED. The orbit range for these updates is from the LAST_ARCHIVED_ORBIT (last orbit updated by this procedure) to at most the LAST_ACQUIRED_ORBIT (last Acquisition-Updated orbit).
This procedure is done when the process needs to be started manually.

Input
N/A

Initial conditions
The Acquisition Update (AUPP_XACQ), Post- Acquisition Update (AUPP_XPAU), Archive Report processing (HLIX_XARC) and Product Order Preparation (PPIO_XROP) processes must not be running at the same time as Archive Report processing.
If either process is running wait for them to finish before starting Product Order Preparation.

Sequence of operations
1) Connect to CUS with an operational username/password.
2) Ensure initial conditions.
Enter: PROCESSES
This produces a display on the screen and if either of the above-mentioned processes are running.
If either process is running then either wait until it is finished.
3) Inform other users of your intent to start Product Order Preparation process.

- Enter the command : START_PROC
- A menu will be displayed, Enter: 40 (i.e. option 40: po_preparation)

- the following text will be displayed:

```
Process type:                PRMSE_PO_PREPARATION
Type 'Y' if you want to start the detached process
```

- Enter: Y. This should start a detached process called PPIO_XROP_nnnn where nnnn is a 4-digit number -- write it down. You will need it in the following steps.

NOTE:

-> If the PPIO_XROP_nnnn process does not start up correctly i.e. the following message is not displayed

```
*** Successful completion ***
```

then Enter: CLEAN_PROC and answer YES to any questions and repeat this step again.

-> If you accidentally type 'N' instead of 'Y', then run CLEAN_PROC as above, log out and start again from Step 1).

4) Inform other users that Archive Report processing has completed:

5) The errorlog is checked automatically. The XXTS0001 and XXPP0001 user accounts are informed by MAIL if errors are found.

6) If errors are found then check with the Technical Support staff that the errors will be handled.

Output

Errorlog in directory:file PPIO_XROP_LOG_DIR:PPIO_XROP_nnnn.ERR.

mail send to XXTS0001 and XXPP0001 if errors occured.

Error handling

Inform CUS Team about any error reported

2.3.4 GENERATE PRODUCT ORDERS

User profile	CUS Production Planner
Connection	VT200
Start time	~ 16:30
Duration	~ 15 minutes
Frequency	Daily
References	
Related tables and files	PRJDD_po_params, PRJDD_product_journal, URQDD_user_request
Process Name	

Scope
Generate and transmit Product Orders to the PAFs.
Input
User requests, product journals.
Initial conditions
Product journals must be in ARCHIVED state.
Sequence of operations
1) Start up a CUS Order Desk session.
2) From the Main Menu choose option:
- 6. Production Planning and Monitoring

3) From this sub-menu, choose option
- 3. Distribute Product Orders

This brings up the Product Order Query/Summary form.
4) Query for READY product journals using this form. Queries can be based on PAF_ID, UR_ID, USER_ID, PJ_ID, product type, target-delivery-date, catalogue information or any combination of these parameters.
NOTE that Product Orders can only be generated for product journals in an READY status.
NOTE that Product Orders will be generated for ALL the product journals listed in the Summary Area of the form.
For product journals which should not have Product Orders generated, use the CLRREC key to remove the records from the summary block
e.g. you will remove Product Orders to DP for FDCs having copy flag = N.
5) Choose option 2. Distribute All POs from the Product Order Query/Summary form to generate the Product Orders.

Messages will appear at the bottom of the screen to indicate the progress of the Product Order generation process.
6) Exit from the form (press twice PF4 and on ORDER DESK choose option 11 Logoff).

Output

ODPO and ODPD files (in pairs) where the ODPO contains information relevant to all the product orders detailed in the ODPD.

Error handling

Contact CUS Team in case of error message.

2.3.5 PROCESS PRODUCTION STATUS REPORTS

User profile	Production Planner
Connection	VT200
Start time	See Operator Time Schedule
Duration	~ 10 minutes
Frequency	Daily
References	
Related tables and files	PRADD_product_accounting, PRJDD_product_journal, UNEDD_unusual_event, URQDD_user_request REPSs reports
Process Name	PPIO_XPST_nnnn

Scope
CUS processing of incoming Product Status Report (REPS) files. This procedure is normally started by the CUS Automatic Event Scheduler.
The following procedure is only used if reports must be processed manually.
Input
Product Status Report (REPS) files
Initial conditions
The Post- Acquisition Update (AUPP_XPAU) processe must not be running at the same time.
If this process is running wait for it to finish.
Sequence of operations
1) Connect to CUS with an operational username/password
2) Ensure initial conditions.
Enter: PROCESSES
This produces a display on the screen and if either of the above-mentioned process are running.
If a Post-Acquisition Update process is running then wait until it is finished.
3) Inform other users of your intent to start processing Production Status Reports.

- Enter the command : START_PROC
- A menu will be displayed, Enter: 19 (i.e. option 19: prod_status_rpt)
- the following text will be displayed:

```
Process type:                PRMSE_PROD_STATUS_RPT
Type 'Y' if you want to start the detached process
```

- Enter: Y. This should start a detached process called PPIO_XPST_nnnn where nnnn is a 4-digit number -- write it down. You will need it in the following steps.

NOTE:
-> If the PPIO_XPST_nnnn process does not start up correctly i.e. the following message is not displayed

```
*** Successful completion ***
```

then Enter: CLEAN_PROC and answer YES to any questions and repeat this step again.
-> If you accidentally type 'N' instead of 'Y', then run CLEAN_PROC as above, log out and start again from Step 1).
4) Inform other users that Production Status Report processing has completed:
5) The errorlog is checked automatically. The XXTS0001 and XXPP0001 user accounts are informed by MAIL if errors are found.
6) If errors are found then check with the Technical Support staff that the errors will be handled.
7) Check to see if any PAF Product Journal Difference Reports were produced:

- DIR USER_REPORT_DIR:PJDP*ddmmmyyyy*.RPT

In place of "ddmmmyyyy" put today's date -- for example, "10jun1992".

Output

Errorlog in directory:file PPIO_XPST_LOG_DIR:PPIO_XPST_nnnn.ERR.
mail send to XXTS0001 and XXPP0001 if errors occured.
Product Journal Difference Reports in USER_REPORT_DIR:PJDPcccc_ddmmmyyyy_hhmmss.RPT (only if product journals have been rejected).

Error handling

Notify CUS Team about any error

2.3.6 MONITORING OF PENDING PRODUCT ORDERS AND REPS GENERATION

User profile	Production Planner XXPP000x
Connection	VT220
Start time	On request
Duration	5-10 minutes
Frequency	On request
References	
Related tables and files	PRJDD_product_journal - SYS$LOGIN:PENDING_xx_FOR_PAF.LIS (xx is a PAF ID), - SYS$LOGIN:PENDING_xx_FOR_PP.LIS - PPIO_XPST_QUEUED_DIR:REPS_yymmddxxEC0000.En (yymmdd is the generation date, xx is the PAF ID, n = 1 or 2)

Scope

This procedure is composed of two tools used:
1- to retrieve the list of pending product orders for a given PAF (i.e Submitted, In production and Produced),
2- to generate a REPS, with status D (i.e. Dispatched) for that product orders.
this second tool will be used when the orders are closed at the PAF and the PAF is not able to regenerate anymore a REPS for those orders.

Initial conditions

You must be connected to any account used by the Production Planner.

Sequence of operations

I- retrieving the list of pending product orders for a given PAF

1- To start, type the command: **PAF_PENDING_PROD**
2-Choose an option from the main menu:

```
---------------------------------
  Handling  PAF  pending production
  ---------------------------------

            Main  Menu


    1- Find pending Product Orders

    2- View PP list
```

```
                    3- View PAF list

                    4- Generate REPS report

                    5- Exit from this menu


                Choose an option (1, 2, 3, 4 or 5):

                    ---------------------------------
```

-> *Option 1* enables to list the pending product orders. You will be asked:
. the PAF ID,
. a 'before' date i.e. the tool will retrieve the orders having the Target Delivery Date before that date.

Two lists are built and you return then, to the main menu. Use the following options to display the lists.

-> *Option 2* enables to display - with the editor - the list built for internal use.

-> *Option 3* enables to display - with the editor - the list built for the PAF.
This list is a kind of memo for the PAF. It starts with a general explanation and then lists the pending orders. Some fields (Quantity, nb of copies, production date and delivery date) are left blank and should be filled in by the PAF in case it is not able to generate anymore a REPS. In that case when you receive the list back from the PAF,you will run the second tool.

Notes:
- Exit from the editor using PF1 Q command.
- Answer to the question: Do you want to print the report, y/n [y] (default Yes).

-> *Option 4* gives a direct access to the second tool main menu (see below).

3- Send the list to the PAF. The file name is SYS$LOGIN:PENDING_xx_FOR_PAF.LIS where xx is the PAF ID.
If the list has to be filled in by the PAF, send it by E-mail and asked the PAF to send it back also, by E-mail.
The list for internal use is in the file SYS$LOGIN:PENDING_xx_FOR_PP.LIS

2- to generate a REPS, with status D

1- To start, type the command: **PAF_PENDING_PROD** and chooses option 4
or, type the command **REPS_GENERATION** to access directly the tool
2-Choose an option from the tool main menu:

```
                ------------------------------------------------------------
                Automatic generation of REPS report for Completed Product Orders
```

```
-----------------------------------------------------------------
                          Main Menu


              1- Insert manually

              2- Insert from input file

              3- Exit and put the REPS into the queue


        Choose an option (1, 2 or 3):

             -----------------------------------------------------------
```

-> *Option 1* enables to generate a record in a REPS report for a product orders.
You will be asked to enter the following information:
. the PAF ID (only the first time, then it assumes the orders are all for the same PAF),
. the satellite ID (can be E1 or E2 in the same session. In this case two distinct REPS will be created),
- the Product Journal ID,
- the number of frames produced,
- the number of copies done,
- the production date,
- the delivery date

The tools retrieves the Product Journal - which must be in Submitted, In production or Produced status - and generates a REPS record with status D.

-> *Option 2* enables to generate records in a REPS report for a list product orders contained in an input file. The file is the one generated by the first tool i.e.

SYS$LOGIN:PENDING_xx_FOR_PAF.LIS

it must be:

- in your SYS$LOGIN directory and named: PENDING_xx_FOR_PAF.LIS,
- filled in by the PAF,
- edited to remove the explanation lines at the beginning.

You will be asked only to enter the PAF ID (only the first time to individuate the file in input, then it assumes the orders are all for the same PAF).
The tool reads the input file and generates a REPS record for each record in input.

Notes:

- You can execute option 1 and 2 in the same session, since product

```
        orders are put in the same REPS,

     - If you received a reply from the PAF by E-mail on PROCUS you will:
       . goto into your mail,
       . extract the mail giving as file name SYS$LOGIN:PENDING_xx_FOR_PAF.LIS,
       . edit the file and remove the header.

    -> Option 3 lets you exit from the tool main menu. If a REPS has been
       generated, it will display a message. The REPS are put automatically
       in the PPIO_XPST_QUEUE_DIR to be processed at the next Production Status
       Reporting process execution.

Notes: If you run the command REPS_GENERATION, you will return to the DCL prompt.
       If you run the command PAF_PENDING_PROD, you will return to that tool
       main menu.
```

Output

Fisrt tool: SYS$LOGIN:PENDING_xx_FOR_PAF.LIS (xx is a PAF ID),
SYS$LOGIN:PENDING_xx_FOR_PP.LIS.
second tool: REPS_yymmddxxEC0000.En (yymmdd is the generation date,
xx is the PAF ID, n = 1 or 2)

Error handling

When an error message is displayed during the tool execution, contact the Technical Support Team.

2.3.7 DELETION FROM CUS PRODUCT CATALOGUE

User profile	Production Planner XXPP000x
Connection	VT220
Start time	On request
Duration	2 minutes by product
Frequency	On request
References	
Related tables and files	HLQDD_series_selection, HLQDD_acq_series, HLQDD_prod_series, HLQDD_prod_series_frame, CATDD_unpr_catalogue, CATDD_product_catalogue, SYSDATA:DELETE_PRODUCTS_yymmddhhmmss.LOG

Scope
This tool allows to delete a product from the CUS product catalogue if it is not in the Product Journal and Production Series tables.
Initial conditions
You must be connected to any account used by the Production Planner.
Sequence of operations
1- To start, type the command: **DELETE_PROD**
2- Answer then to the questions asked by the tool:

```
------------------------------
Deleting Poducts from Catalogue
------------------------------


Arch Locat      [..]    (new value or type exit): dp
Satellite       [..]    (new value or type exit): e1
Sensor          [...]   (new value or type exit): sar
Orbit Numb      [.....] (new value or type exit): 12358
Frame Numb      [....]  (new value or type exit): 3609
Produ Type      [.....] (new value or type exit): slc
Scene Quadrant [.]      (new value or type exit): 3
Gr Station      [..]    (new value or type exit): th


-----------------------------------------------------------------
```

Notes: the Scene Quadrant is asked only for a SLC product.
3- The tool displays what has been found in the catalogue:

```
                Result of search on Products Catalogue
                --------------------------------------

ORBIT  FRAME  GS PAF PROD S DATE_PROD
-----  -----  -- --- ---- - --------------------
12358  3609   TH DP  SLC  3 21-JUN-1994:23:47:52

                    Press RETURN to continue
```

Notes: if more than one product is retrieved, and one only need to be deleted, note down the processing date of the one that is to be deleted. It will be asked later.
4- The tools searches then for Production Series and Product Journals for that product.

```
   -> if nothing is found the following message is displayed and the
      deletion can be done.


  No Production Series and no Product Journals found,you can delete the product


                              Press RETURN to continue
```

```
   -> otherwise, the Production Series and/or Product Journals found are
      displayed and the deletion cannot be done.
```

5- If the deletion can be done the following menu is displayed:

```
                          -------------------------------
                          Deleting Poducts from Catalogue
                          -------------------------------


                         1- Delete the product(s)


                         2- Delete the product for a given processing date


                         3- Do not delete the product

                         4- Exit
```

```
                    Your Choice (1-4):

                  ------------------------------------------

-> Option 1 enables to delete the product(s). More than one product
   may be deleted   since no processing date is asked to differentiate
   multiple entries in the catalogue.

-> Option 2 enables to delete the product. The processing date is
   asked before the deletion to individuate a single catalogue entry.

-> Option 3 enables not to delete the product and goes on for a next product.

-> Option 4 enables to exit from the tool without deleting the product.
```

Notes: All the deletions done during a session are written in a Log File:
SYSDATA:DELETE_PRODUCTS_yymmddhhmmss.LOG
6- To delete another product, you can use the data previously entered and type in only the new one. In the example below, another frame for the same PAF/SAT/Sensor/Orbit/Product type/Station is to be deleted. Only the frame number need to be entered:

```
          --------------------------------
          Deleting Poducts from Catalogue
          --------------------------------


  Arch Locat      [DP]     (new value or type exit):
  Satellite       [E1]     (new value or type exit):
  Sensor          [SAR]    (new value or type exit):
  Orbit Numb      [12358]  (new value or type exit):
  Frame Numb      [3609]   (new value or type exit): 3627
  Produ Type      [SLC ]   (new value or type exit):
  Scene Quadrant  [3]      (new value or type exit):
  Gr Station      [TH]     (new value or type exit):


 ------------------------------------------------------------------------
```

Output
The Log File: SYSDATA:DELETE_PRODUCTS_yymmddhhmmss.LOG
Error handling
When an error message is displayed during the tool execution, contact the Technical Support Team.

2.3.8 DELETION OF KS/UP ENTRIES ARCHIVED AT DP

User profile	Production Planner XXPP000x
Connection	VT220
Start time	On request
Duration	5-10 minutes
Frequency	On request
References	
Related tables and files	EXTDD_late_orbit_entry, CATDD_unpr_catalogue.

Scope

To remove from the unprocessed catalogue the KS orbits acquired at UP and archived at DP.
These orbits will never been archived at UP since the tapes have been routed to DP but,
entries for UP have been created since UP is the default PAF for KS. They need to be set to unavailable.
This tool was developed to cope with a particular situation, limited in time, in which UP was overloaded.

Initial conditions

You must be connected to any account used by the Production Planner.

Sequence of operations

1- To start, type the command: **KS_UP_DP**

2- The Production Planner answers then to the questions asked by the tool:

```
                    ----------------------------------------
                    Setting of KS/UP/DP orbits to Unavailable
                    ----------------------------------------


  - Retrieve KS orbits still Acquired at UP and Archived at the same time at DP
  - Insert these orbits/frames into EXTDD_LATE_ORBIT_ENTRY table to be set to
    unavailable status by the Post-Acquisition Update Process


Enter the SAT ID (E1/E2) : E1
Enter start mission orbit: 21500
Enter end mission orbit:   22000

                    ----------------------------------------
```

3- The tools displays - if required - the list of orbits found within the range.

```
                    ----------------------------------------
                    Setting of KS/UP/DP orbits to Unavailable
```

```
                    ----------------------------------------

Do you want to edit the list, y/n [n]: y          (default is Yes).

                    ----------------------------------------
```

The list is a sequence of SQL inserts in the EXTDD_late_orbit_entry table:
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',21596,9,7191,'KS','UP',0,0);
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',21598,9,7191,'KS','UP',0,0);
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',21608,9,7191,'KS','UP',0,0);
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',21610,9,7191,'KS','UP',0,0);
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',21611,9,7191,'KS','UP',0,0);
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',21618,9,7191,'KS','UP',0,0);
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',21624,9,7191,'KS','UP',0,0);
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',21626,9,7191,'KS','UP',0,0);
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',21638,9,7191,'KS','UP',0,0);
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',21639,9,7191,'KS','UP',0,0);
etc.....
4- Exit from the editor using PF1 Q command.
5- Answer to the question:

```
Do you want to set these orbits to Unavailable y/n [n]: y      (default is No).
```

if you answer yes, the file you edited in step 3 will be executed and the orbits will be inserted in the EXTDD_late_orbit_entry table. The orbits will be set to unavailable by the Post-Acquisition update process next execution.
6- Answer to the question:

```
Do you want to run this tool again for another Satellite/Orbit range y/n [n]:
(default is No to exit).
```

Output
The SQL file: SYS$LOGIN: KS_UP_DP_ORBITSyymmddhhmiss.SQL containing the inserts.
If this file is executed (answering Yes at step 5 above), the file will be save in the SYSDATA PROCUS directory with extension LOG instead of SQL.This allow to keep trace of manipulations done on the catalogue.

Error handling
When an error message is displayed during the tool execution, contact the Technical Support Team.

2.3.9 DELETION OF NFS FRAMES NOT ARCHIVED AT A PAF (DP, IP, UP)

User profile	Production Planner XXPP000x
Connection	VT220
Start time	On request
Duration	5 minutes
Frequency	On request
References	
Related tables and files	EXTDD_late_orbit_entry, CATDD_unpr_catalogue.

Scope

When a PAF screens an orbit received from a station, the number of frames actually archived may be less than the initial number thought to be acquired.
The CUS unprocessed catalogue will remain with these frames - assumed as acquired first - but never archived at the PAF.
The frames - for National and Foreign stations - can be identified since they:
1- have Ground_Station_ID = PAF_ID (e.g. CO/CO, CU/CU, ...),
2- are in a status acquired or archived (in that case archived means auto-archived),
3- belong to an orbit for which exist other frames archived at a real PAF (i.e. DP, IP, UP).
The purpose of the tool is to individuate such frames and set them to unavailable.

Initial conditions

You must be connected to any account used by the Production Planner.

Sequence of operations

1- To start, type the command: **DELETE_NFS_FRAMES**
2- The Production Planner answers then to the questions asked by the tool:

```
                    ---------------------------------------------
                    Setting of Acquired NFS frames to Unavailable
                    ---------------------------------------------


    - Retrieve still Acquired NFS frames, belonging to an orbit which has been
      archived at DP,IP,UP
    - Insert these orbits/frames into EXTDD_LATE_ORBIT_ENTRY table to be set to
      unavailable status by the Post-Acquisition Update Process


Enter the SAT ID (E1/E2) : E1
Enter start mission orbit: 1000
```

```
Enter end   mission orbit: 2000
Enter Ground Station ID:   CO

                        ----------------------------------------
```

3- The tools displays - if required - the list of orbits found within the range.

```
                        ------------------------------------------
                        Setting of Acquired NFS frames to Unavailable
                        ------------------------------------------


Do you want to edit the list, y/n [n]: y          (default is No).

                        ----------------------------------------
```

The list is a sequence of SQL inserts in the EXTDD_late_orbit_entry table:
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',1671,495,495,'SE','SE',0,0);
insert into ORAPROD.EXTDD_LATE_ORBIT_ENTRY VALUES ('E1','SAR',1671,513,513,'SE','SE',0,0);
etc.....
4- Exit from the editor using PF1 Q command.
5- Answer to the question:

```
Do you want to set these orbits to Unavailable y/n [n]: y      (default is Yes).
```

if you answer yes, the file you edited in step 3 will be executed and the orbits will be inserted in the EXTDD_late_orbit_entry table. The orbits will be set to unavailable by the Post-Acquisition update process next execution.
6- Answer to the question:

```
Do you want to run this tool again for another Satellite/Orbit range y/n [n]:
(default is No to exit).
```

Output
The SQL file: SYS$LOGIN: DELETE_NFS_FRAMESyymmddhhmiss.SQL containing the inserts.
If this file is executed (answering Yes at step 5 above), the file will be save in the SYSDATA PROCUS directory with extension LOG instead of SQL.This allow to keep trace of manipulations done on the catalogue.
Error handling
When an error message is displayed during the tool execution, contact the Technical Support Team.

2.4 *MMCC Interface*

2.4.1 ACQUISITION REPORT ERROR CHECKING .

User profile	Technical support
Connection	VT200
Start time	8h30-9h00
Duration	N/A
Frequency	Daily, every morning
References	
Related tables and files	REAQ_*.En files
Process Name	GSIP_XACQ_nnnn

Scope
The error checking normally occurs automatically after Acquisition Report processing. If errors are found, a mail message is sent to the XXTS0001 account.
The mail is systematically read every morning (at least) by the Technical Support staff which **starts the corrective actions immediately.**
Support can be done by the CUS Maintenance team and the Mission Planner
Input
Acquisition Report errorlog (GSIP_XACQ_nnnn.ERR) and XXTS0001 mail e.g.:

```
-------------------------------------------------------------------------
From:       PROCUS::CUSPROD      "AES is watching you"

To: XXTS0001,XXOP0001
CC:
Subj:       Acquisition Report Processing Errors

See cuserrlg for details:

GSIP_XACQ_LOG_DIR:GSIP_XACQ_6787.ERR
-------------------------------------------------------------------------
```

Initial conditions
N/A
Sequence of operations
1- New errors handling:

- Connect to XXTS0001 and type the command MAIL. Mails not yet processed are either in the NEWMAIL or MAIL folder.
- from the mail you can edit the file: RED GSIP_XACQ_LOG_DIR:GSIP_XACQ__nnnn.ERR

where nnnn is the number of the process you are now reading in the mail.
(if you user TPU editor, to improve readability and/or increase the column size of the screen, use the PF1 key followed by "W".)
Search for processing errors by pressing the FIND key and entering the search string "error " (followed by RETURN). To hop to the next "error " string, press the PF3 key. If this string is not found, you will see the message "String not found" at the bottom of the screen.

- Errors are identified, analyzed and reported in pre-formatted template (i.e. CUS Processing Error report). For each error mention: the Report Name (i.e. REAQ_*), the record number, the anomaly message from the log file and the corrective action required.
- Prepare a fax to be sent to the corresponding Ground Station. A fax template exists for each Ground Station. Print it, add the date and a reference number taken from the section chrono.
- Join the fax to the CUS Processing Error report and send it to the Ground Station.
- Keep the fax/CUS Processing Error report in the ad-hoc ring binder in the Open actions part.
- move the mail to the CUS_PROC folder once all actions have been completed.

Notes: support can be obtained from either CUS Maintenance team or Mission Planner. In any case **Mission Planner must be informed** of the error.

2- Open errors handling:

In coordination with the Mission Planner, the Technical Support staff **will follow-on** the correction of open errors i.e.:

- the Ground Station should send back the fax reporting on the corrective action done on their side.
- the Ground Station should send a new and correct REAQ_* report.
- When the REAQ_* has been successfully processed by CUS, the Technical Support staff will close the action i.e. put the fax/CUS Processing Error report in the Closed actions part of the ring-binder.

3- Monthly reporting:

Every month at a given date fixed with the ESRIN responsible the Technical Support staff will provide a brief summary of the actions handled during the month.

Output

fax to the Ground Station including the CUS Processing Error report.
CUS Processing Error report ring binder for the Ground Station.
Monthly report.

Error handling

N/A

Notes

N/A

2.4.2 ARCHIVING REPORT ERROR CHECKING .

User profile	Technical support
Connection	VT200
Start time	8h30-9h00
Duration	N/A
Frequency	Daily, every morning
References	
Related tables and files	REAR_*.En files
Process Name	HLIC_XARC_nnnn

Scope
The error checking normally occurs automatically after Archiving Report processing. If errors are found, a mail message is sent to the XXTS0001 account.
The mail is systematically read every morning (at least) by the Technical Support staff which **starts the corrective actions immediately.**
Support can be done by the CUS Maintenance team and the Mission Planner
Input
Archiving Report errorlogs:
HLIC_XARC_nnnn.ERR and VER_REAR_ddmonyyyy_hhmmss.RPT
and
XXTS0001 mail e.g.:

```
-------------------------------------------------------------------------
From:   PROCUS::CUSPROD      "AES is watching you"

To:     XXTS0001,XXPP0001
CC:
Subj:   Archive Report Processing Errors

Please see today's VER_REAR report file for details:
CUSPROD$DISK:[CUSPROD.TCS.OLD_RECEIVE.REAR.CHECKED.LOGS]VER_REAR_25OCT1996_03010
0.RPT

The following REAR file(s) contain(s) errors:
REAR_961023CPEC1357.E2

The file(s) have been moved to:
CUSPROD$DISK:[CUSPROD.TCS.OLD_RECEIVE.REAR.BAD_DO_NOT_PROCESS]
-------------------------------------------------------------------------
or
```

```
------------------------------------------------------------------------
From:       PROCUS::CUSPROD      "AES is watching you"

To:         XXTS0001,XXOP0001
CC:
Subj:       Acquisition Report Processing Errors

See cuserrlg for details:

HLIC_XARC_LOG_DIR:HLIC_XARC_6787.ERR
------------------------------------------------------------------------
```

Initial conditions

N/A

Sequence of operations

1- New errors handling:

- Connect to XXTS0001 and type the command MAIL. Mails not yet processed are either in the NEWMAIL or MAIL folder.
- from the mail you can edit the files:

VER_REAR_ddmonyyyy_hhmmss.RPT or HLIC_XARC_LOG_DIR:HLIC_XARC__nnnn.ERR
(if you user TPU editor, to improve readability and/or increase the column size of the screen, use the PF1 key followed by "W".)
-> in VER_REAR_ddmonyyyy_hhmmss.RPT you will find the result of the analysis done on the REAR_* supplied in input of the HLIC_XARC pre-processor.
The log gives a list of REAR_* and for each of them the wrong records/frames together a diagnostic. The errors will be grouped together in order to send a separate report to each PAF concerned.
-> in HLIC_XARC_nnnn.ERR you will find the result of the analysis done on the REAR_* supplied in input of the HLIC_XARC process itself.
Search for processing errors by pressing the FIND key and entering the search string "error " (followed by RETURN). To hop to the next "error " string, press the PF3 key. If this string is not found, you will see the message "String not found" at the bottom of the screen.

- All errors from both logs are identified, analyzed and reported in pre-formatted template (i.e. CUS Processing Error report). For each error mention: the Report Name (i.e. REAR_*), the record number, the anomaly message from the log file and the corrective action required. This operation is easier when errors are coming from the HLIC_XARC pre-processor due to the log layout (as explained above).
- Prepare a fax to be sent to the corresponding PAF. A fax template exists for each PAF. Print it, add the date and a reference number taken from the section chrono.
- Join the fax to the CUS Processing Error report and send it to the PAF.
- Keep the fax/CUS Processing Error report in the ad-hoc ring binder in the Open actions part.
- move the mail to the CUS_PROC folder once all actions have been completed.

Notes: support can be obtained from either CUS Maintenance team or Mission Planner. In any case **Production Planner must be informed** of the error.

2- Open errors handling:

In coordination with the Production Planner, the Technical Staff **will follow-on** the correction of open errors i.e.:

- the PAF should send back the fax reporting on the corrective action done on their side.

- the PAF should send a new and correct REAR_* report.
- When the REAR_* has been successfully processed by CUS, the Technical Support staff will close the action i.e. put the fax/CUS Processing Error report in the Closed actions part of the ring-binder.

3- Monthly reporting:

Every month at a given date fixed with the ESRIN responsible the Technical Support staff will provide a brief summary of the actions handled during the month.

Output

fax to the PAF including the CUS Processing Error report.
CUS Processing Error report ring binder for the PAF.
Monthly report.

Error handling

N/A

Notes

N/A

2.4.3 PRODUCTION STATUS REPORT ERROR CHECKING .

User profile	Technical support
Connection	VT200
Start time	8h30-9h00
Duration	N/A
Frequency	Daily, every morning
References	
Related tables and files	REPS_*.En files
Process Name	PPIO_XPST_nnnn

Scope
The error checking normally occurs automatically after Archiving Report processing. If errors are found, a mail message is sent to the XXTS0001 account.
The mail is systematically read every morning (at least) by the Technical Support staff which **starts the corrective actions immediately.**
Support can be done by the CUS Maintenance team and the Mission Planner
Input
Production Status Report errorlogs:
PPIO_XPST_nnnn.ERR
and
XXTS0001 mail e.g.:

```
-------------------------------------------------------------------------
From:   PROCUS::CUSPROD      "AES is watching you"
To: XXTS0001,XXPP0001
CC:
Subj:   Product Status Report Processing Errors

See cuserrlg for details:

PPIO_XPST_LOG_DIR:PPIO_XPST_4903.ERR
-------------------------------------------------------------------------
```

Initial conditions
N/A
Sequence of operations
1- New errors handling:

- Connect to XXTS0001 and type the command MAIL. Mails not yet processed are either in the NEWMAIL or MAIL folder.

- from the mail you can edit the log file:

in PPIO_XPST_nnnn.ERR (where nnnn is the number of the process you are now reading in the mail) you will find the result of the analysis done on the REPS_* supplied in input of the PPIO_XPST process itself. (if you user TPU editor, to improve readability and/or increase the column size of the screen, use the PF1 key followed by "W".)
Search for processing errors by pressing the FIND key and entering the search string "error " (followed by RETURN). To hop to the next "error " string, press the PF3 key. If this string is not found, you will see the message "String not found" at the bottom of the screen.

- All errors from both logs are identified, analyzed and reported in pre-formatted template (i.e. CUS Processing Error report). For each error mention: the Report Name (i.e. REPS_*), the record number, the anomaly message from the log file and the corrective action required.
- Prepare a fax to be sent to the corresponding PAF. A fax template exists for each PAF. Print it, add the date and a reference number taken from the section chrono.
- Join the fax to the CUS Processing Error report and send it to the PAF.
- Keep the fax/CUS Processing Error report in the ad-hoc ring binder in the Open actions part.
- move the mail to the CUS_PROC folder once all actions have been completed.

Notes: support can be obtain from either CUS Maintenance team or Mission Planner. In any case **Production Planner will be informed** of the error.

2- Open errors handling:

In coordination with the Production Planner, the Technical Support staff **will follow-on** the correction of open errors i.e.:

- the PAF should send back the fax reporting on the corrective action done on their side.
- the PAF should send a new and correct REPS_* report.
- When the REPS_* has been successfully processed by CUS, the Technical Support staff will close the action i.e. put the fax/CUS Processing Error report in the Closed actions part of the ring-binder.

3- Monthly reporting:

Every month at a given date fixed with the ESRIN responsible the Technical Support staff will provide a brief summary of the actions handled during the month.

Output

fax to the PAF including the CUS Processing Error report.
CUS Processing Error report ring binder for the PAF.
Monthly report.

Error handling

N/A

Notes

N/A

2.5 *MUIS Interface*

2.5.1 DOWNLOADING CUS CATALOGUE TO MUIS

User profile CUS Operators

Connection VT200

Start time

Duration 4 hours

Frequency As requested by MUIS Responsibles

References

Related tables and files
(IN) CATDD_unpr_catalogue: CUS Catalogue
(IN OUT) CATDD_unpr_catalogue_log: log table of all changes done on CUS Catalogue
(OUT) SARUF_*.En: Full download files for SAR Catalogue
(OUT) ATSUF_*.En: Full download files for ATS Catalogue

Scope
To download CUS Catalogue to MUIS, in order to realign MUIS Catalogue in case of operational problems, and/or at startup of operations of MUIS
Input
Satellite
Sensor
Date Range to be used for filtering frames over Acquisition Start Time
(ENTER ALWAYS 01-JAN-1990:00:00:00 - 01-JAN-2010:00:00:00, i.e. no filter applied, whole catalogue downloaded)
Initial conditions
Operator logged in on Procus, Oracle Account with write privileges on Oraprod Database account, 2 sessions. The Procus account shall be included in CUS operatioanl group,
in order to access CUS environment facilities (e.g. CUSPROD account)
CUS Maintenance Team alerted about the generation of the full download.
No user working on CUS
Enough free space available on disk hosting the CUSF_SAVED_DIR directory (currently DISK$RAID_1) : by example, for downloading E1/ATSR data, about 500,000 blocks will be needed.
Sequence of operations

1. On the first session, enter the following commands:
   SQL
   LOCK TABLE CATDD_UNPR_CATALOGUE_LOG IN EXCLUSIVE MODE NOWAIT;

wait for the prompt back.
This will prevent other users from changing data in the CUS Catalogue during the generation of the full download, taking care of the actual synchronization between Full Catalogue and Incremental downloads.
PLEASE NOTE THAT THE PREVIOUS COMMAND IS ABLE TO FREEZE THE ACTIVITY OF THE WHOLE CUS FACILITY.

2. On the second session, run the tool
   MUIS_CAT_DOWN_UF
   Specifying Satellite, Sensor and Date Range of interest.
   When the tool has completed, the new download file is displayed, within the directory CUSF_SAVED_DIR
3. If the download has been requested by MUIS responsibles, enter:
   COPY <file_just_created> CUS_TO_TCS_DIR: /lo
   checking for success.
4. Going back to the first session, for the <satellite> and <sensor> for which the download file has been generated, enter
   DELETE CATDD_UNPR_CATALOGUE_LOG WHERE satellite = <satellite> AND sensor = <sensor>;
   COMMIT;
   EXIT;

Output

SARUF*.* once SAR catalogue has been dumped
ATSUF*.* once ATS catalogue has been dumped

Error handling

In case of errors:
1)-Be sure that the default directory of your session is one where you are authorized to write. A few work files will be created within the current directory, to be removed when the procedure completes.
2)-Check that your account belongs to the same group as the CUSPROD account

Notes

The full download is a very big file. In order to save disk space, whenever the full download for a mission is requested, please inform CUS Maintenance Team, in order to let them recover disk space from previous full downloads.

2.6 *Operations monitoring*

2.6.1 CHECKING MAIL MESSAGES

User profile	CUS System Manager
Connection	VT200
Start time	on request
Duration	30 minutes
Frequency	daily
References	N/A
Related tables and files	N/A

Scope
Any process or batch that executes operational actions on the system is programmed to send an email whenever an error occurs. A few processes send the email even if they terminate successfully. This allows a strict check on the system behaviour and a fast response on errors.

Sequence of operations
Every morning the emails sent to the XXTS0001 account on PROCUS are checked. If the emails contain errors the correspondent process actions are investigated in order to discover the cause that generates the error and remove it if possible or creates a Software Change Request (SCR) in case the error is due to the algorithm developed. The more usual way to investigate the error is checking the various logs that every process or batch generates. When the email has been checked, it should be moved into its relative folders in order to allow for a future investigation. The correspondence between the subject of the emails and their folders are exposed hereunder:

F O L D E R	N O T E
NEWMAIL	NEWMAIL (standard folder)
ARCHIVE_RPT_ATS	Archive Report Processing Errors (ATS)
BASELINES	BSLN_LOAD_BATCH Baselines Files Loader errors Daily IBIS file not found
CATALOG	ERROR_IN_CUS_CAT_CHECK_BATCH_EXECUTION CUS_CAT_CHECK_BATCH execution report

CHECK_BATCH	CHECK_BATCH_QUEUE reporting
	CHECK_BATCH_QUEUE reporting: ERROR, batch not found
	>>> CHECK_BATCH : Batch *** NOT FOUND ***
	>>> VERIFY_CHECK_BATCH : CHECK_BATCH *** NOT FOUND ***

CHECK_ERSISS	>>> WARNING: ERSISS is not available.
	>>> WARNING: ERSISS is available.
	Check Iss errors

CLEAN_CATALOGUE	FRAMES DELETED BY CLEAN CAT BATCH CLEAN_CAT_BATCH Log file Clean Catalogue errors
CUS_PROC	Archive Report Processing ... Post-Acquisition Update Processing ... Acquisition Update Processing ... Product Status Report Processing ... . (Personal Name = "AES is watching you")
CUS_REJECTIONS	Handling_PAUP_rejections Handling_ACNF_rejections HANDLING_CUS_REJECTIONS_REPORTING
DAILY_PO	DAILY_PO(s)_LIST Pending Product List for Italian PAF Pending Product List for German PAF Pending Product List for Central PAF Pending Product List for UK PAF
DESC	Update DESC Log File... DESC File Server ...
FIX_REAR	Fix_rear_ats Report

FTP	FTP: Failure, Automatic Recovery Planned (...)
	FTP: Automatic Recovery Completed (...)
	>>> ERROR : FTP_TRANSFER_PROC Failure (...)
	>>> FATAL ERROR : FTP_TRANSFER_PROC (...)
	FTP: Error File ... Not Found

GAP	Automatic_GAP_file_generation
GETSWAT	BATCH_GETSWAT_GS Log File >>> ERROR: GETSWAT_GS Failure
IMAGE_SERVER	Localization Log... ImageServer Files Loading errors >>> WARNING: Localization Log File Not Found. IMAGEDB_MON: File CUTLOG.TXT not found IMAGEDB_MON: File ERSLOG.TXT not found IMAGEDB_MON: File SEND_LOG.TXT not found Image Server Log: CUTLOG.TXT Image Server Log: ERSLOG.TXT

ISS	ISSCUS_LOG_FILE_CONTROL
JACQ (OBSOLETE)	JERS Acquisition Table Update LOG
JCAT (OBSOLETE)	JERS CATALOG log file control
LBR_FDP	LBR_Dist_Sched_for_Sth_Africa_reporting LBR_FDP_Dist_Sched_gen_for ...
LBR_PRODUCT	New global LBR product in CUS on <DD MON> ERROR: New global LBR product is CUS on <DD MON> No new global LBR product is CUS on <DD MON>
MAIL	MAIL (standard folder)
MISSING_DATA_PERCENTAGE_DP	MISSING DATA PERCENTAGE ERRORS...
MUIS	Muis_B_upload_files_gen errors Muis Y2K Inventory Files errors MUIS ingestion errors IDS Directories cleaner IDS loading errors BDS Directories cleaner
NOAA	NOAA Orbit errors
OHS	Prepared FAX for Promise orders OHS INVENTORY UPDATE OHS_INV_UPDATE_BATCH errors OHSS_POS_BATCH errors Ohs alignment to Cus errors
OHSF	New orders by OHSF
OTHERS	(General correspondance, usually from individuals)
PENDING_GLOBAL	Pending Global Product Orders GPC_PENDING_ORDERS_BATCH errors Pending Global Product Orders for D-PAF
PEP_NAK	PEPs Not Ackgd by ESOC on Sat. E2
PROJECTS	List of projects having exceeded their quota AO3 PROJECT STATUS... PROJECT_REQUEST_STATUS
REDP	New REDP Files from ESOC
REPR	REPRT File Error : ...
SEND_MAIL	MAIL: SEND_MAIL_PROC Failure (...)
SHIPMENT	Shipment_Update TBS LISTING Shipment_Delay

	AUTOMATIC SHIP REQUEST Pj_hopeless
SHORTLINK	Links too Short Removed Remove Short L1R Links errors
STATS	PAF_Delivery_Delay/Backlog_Stats STATSH computation STATOD monthly computation Catalogues_Status Monthly_Production_Status Monthly_report_for_MP_ Monthly Accumulated Statistics
TBD	TBD Eurimage... New requests submitted from providers No new submitted requests OHS TO BE DONE...
TPMI	TPMI files loading errors >>> CHECK_TPM: Error Detected...
WRONG_FRAMES	Warning: Wrong frames for READY Product Journal
WASTEBASKET	WASTEBASKET (standard folder)

Output

Notes

2.6.2 UPDATING BATCH SETUP

User profile	CUS System Manager
Connection	VT200
Start time	on request
Duration	30 minutes
Frequency	N/A
References	N/A
Related tables and files	N/A

Scope

The configuration of every batch installed is maintained on the database. A tool called BM has been developed to manage the configurations and the installation of the batch processes.

Sequence of operations

The BM tool when launched shows a menu with six options:

1. Configure a batch application
2. Submit a batch application
3. Cancel a batch application and configuration
4. Delete a batch application
5. List batch applications
6. Exit

The first option allows the configuration set-up through the use of Oracle Forms. The form should be filled with the following data:

- Bm Batch Com - The command file to launch
- Bm Batch Queue - The queue where the batch is to be submitted to
- Bm Batch Name - The name showed in the list
- Bm Batch User - The user for the batch submitting
- Bm Batch Log - The full path of the log file
- Bm Batch Dir - The directory where the batch can be found
- Bm Mail User - The user(s) to which send the email
- Bm First Execution - Date and time when the batch should be started for the first time
- Bm Next Execution - Read only. Shows the date and time of the next execution
- Bm Delta Time - Days - Number of days to add to the last time of execution to calculate the next date of execution. Valid when Bm Cyclic flag is checked, otherwise ignored
- Bm Delta Time - Time - Hour minutes and seconds to add to the last time of execution to calculate the next time of execution. Valid when Bm Cyclic flag is checked, otherwise ignored

- Bm Absolute Time - Hour, minutes and seconds of execution. Valid when Bm Daily, Weekly, Monthly, Yearly flags are checked, otherwise ignored
- Bm Frequency Flags - Frequency of execution. More than one can be checked. The algorithm choose the sooner time of execution calculated
- Bm Weekday Flags - Days of the week to run the process. More than one can be chosen. Valid when the Bm Weekly flag is checked, otherwise ignored
- Bm Month Flags - Months during which the batch should run. Valid when Bm Yearly Flag is checked, otherwise ignored
- Bm Day Flags - Days of the month when the batch should run. Valid when Bm Monthly Flag or Bm Yearly Flag is checked, otherwise ignored
- Bm Send Mail Always - If checked the email is sent even on successful termination, otherwise only if an error occur

The second option submits the batch chosen on the list of configured batches showed on the window.
The third option cancel the configuration of the relative batch and remove it from the queue
The fourth option delete the batch from the queue. Note that the configuration is maintained so the batch removed can be submitted again.
The fifth option show a list of configured batches.
The sixth exits the program.

When a new batch is developed and should be installed the following operations are to be accomplished:
- Start BM and select option one
- Fill in the batch configuration and exit. At this point the configuration is saved
- Select option 2.
- Select option 6 to exit.

Output

Notes

2.6.3 CHECKING TOOLS ERRORS

User profile	CUS System Manager
Connection	VT200
Start time	on request
Duration	30 minutes
Frequency	N/A
References	N/A
Related tables and files	N/A

Scope
This procedure should be followed whenever an error occurs.

Sequence of operations
Anytime a process or a batch signals that an error is occurred, an investigation on the possible causes of the error should start. The steps to follow strictly depends on the type of error signalled. As a general rule, the log files should be scanned searching for any anomaly that could have caused the error. Any anomaly occurred to the system, the network and any other legacy application (Oracle,...) should be taken into consideration.
For any batch installed a set of logical name are created. These names point to the directories used by the batch for its execution. The format of the names is codified:

- *batchname*_LOG_DIR pointing to the directory of log files
- *batchname*_SAVED_DIR pointing to the directory where data files produced by the batch are stored
- *batchname*_COMPLETED_DIR pointing to the directory where input data files successfully processed are stored
- *batchname*_ACTIVE_DIR pointing to the directory used by the batch during its execution. It should be left empty on batch termination.
- *batchname*_FAILED_DIR pointing to the directory where input data files unsuccessfully processed are stored
- *batchname*_QUEUED_DIR pointing to the input directory where the batch gets the input data files

The FAILED directory in particular should be checked for input files that possibly contain corrupted data that could have generated the error.

Output

Notes